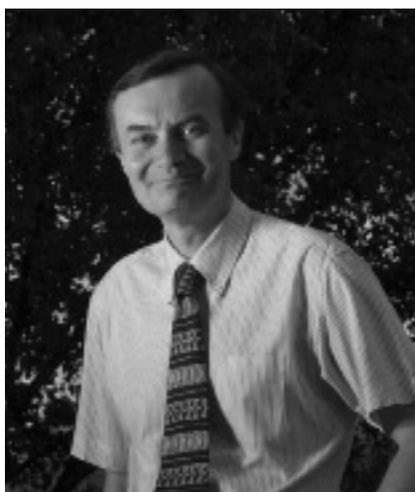


## New doctoral training programmes at Oxford Brookes



The university is making a significant investment (more than £1 million over the next 3 years) in the development and support of named doctoral training programmes which are distinctive, reflect the university's research strengths, deliver a high standard of doctoral training and give access to Research Assessment Exercise (RAE) 3\* and 4\* researchers. These programmes will receive funding to support the academic leadership and research training and activities required, as well as studentships and bursaries amounting to more than £300,000.

The investment is in line with our strategy to increase research student numbers and completions, thus addressing an aspect of the RAE 2008 feedback. Dealing with the issues becomes particularly important with the replacement of the RAE by the Research Excellence Framework (REF) in 2013 as this is likely to take greater note of quantitative measures, such as those relating to research students. However, enhancing our research student provision should not only impact on our success in the REF, as by increasing the

critical mass and vibrancy of research groups, it should also have a positive impact on our research culture. Schools are being encouraged to collaborate in identifying and delivering high profile programmes that build on areas of research excellence and will be attractive to academically strong home, EU and international research students.

The development of such programmes accords with the current funding and offer of research studentships in the UK, which is focusing on the 'training' offered through, and in addition to, the research project and its supervision. Increasing emphasis is being placed on the idea that a doctorate should engender a high level of expertise as a researcher in any particular specialism, as well as generic skills. The concept of a 'critical mass' of students is also important and funding bodies are requiring such critical mass before providing awards.

The Head of the Graduate School, **Dr David Evans**, said: 'This represents a new stage in the university's research development and I look forward to announcing the details of high-profile programmes attractive to excellent research students.'

Two programmes have been named so far and they will be recruiting for September 2009. They are:

- Intelligent Transport Systems (led by Professor William Clocksin and centred in the School of Technology).
- Urban Futures (led by Professor Tim Dixon and centred on the School of the Built Environment).

In addition, there are several programmes under development which offer the prospect of an exciting, innovative suite of programmes in the near future.

# A day in the life...

## Research support in schools

Our continuing and growing success in research is due to the efforts of all our staff, none more so than those who support the research community. Both academics and support staff play invaluable roles in relation to strategic development, managing research activities and budgets, overseeing the welfare and progression of research students, training, mentoring and encouraging researchers and assisting with grant applications and proposals. Support is offered through the Research and Business Development Office, the Graduate School and the Graduate Office as well as within schools. To learn more about how this works in practice, here is a brief glimpse in 'a day in the life' of four members of staff.

### **Jennie Cripps, Research and Consultancy Manager in the School of Social Sciences and Law**

One of my core roles is to assist the school in increasing the quality and quantity of research grant applications submitted to external funding bodies. I proofread research grant applications and provide feedback on general presentation, including spelling, grammar, punctuation, and use the funder's suggested sub-headings to ensure all questions are answered. I also familiarise myself with the latest version of the funding body's guidelines and check that applications adhere to the funding body's rules on, for example, word and page limits, font size and inclusion of all necessary attachments in the required format. It is nice to make a career out of being so petty! As research grant applications are usually reviewed by people who are not subject specialists at some point in the assessment procedure, I also read over all grant applications for clarity and question anything which I don't understand!

As part of my 'quality control' function I am a member of the school Research Grants Panel, responsible for assigning an appropriate academic mentor and reviewer to grant applicants. I ensure that before submission all grant applications have school approval from the Head of Department, the Head of Support Services, the Research Grants Panel Chair and the Dean. I then take the approved application to the Research Support Office for university approval and submit the application by special delivery, if it is required in hard copy, or confirm when we have authorisation for the bid to be submitted electronically. I keep a running tally of all expected proposals, to try and plan for busy periods and to ensure that Research Grants Panel members are assigned to grants on an even basis.

I work closely with the university Research Support Office. Our good working relationship means that we can ensure that applications are costed, checked and approved by school and university, to get grant applications through the system as smoothly as possible, so that they are submitted on time, to tight external deadlines.

Another of my roles requires me to work with the postgraduate research tutor and the university's Graduate Office to support research degree applicants and students in the school. I keep the material on the school's research degree applicants' website updated with detailed advice on the application procedure, answers to frequently asked questions and the latest version of the application pack. I am involved with the advertising of research studentships in the school and co-ordinate the response with the department.

I enjoy carrying out inductions for all new research active staff and research students in the school. I also maintain the research information page on the school internet gateway with the latest research guidelines, strategies, policies, procedures and forms.

I am a good example of work-life balance at Oxford Brookes as I work part-time and have a very successful job-share with Gareth Preston. Gareth is currently working on a PhD at the university.

### **Dr Catherine Hobbs, Director of Research, School of Technology**

On arriving at Brookes in the morning, I turn on my computer and check my email. This usually adds two or three extra things to my to-do list for the day! I pop down to the kitchen to make a coffee, pausing to chat with one of our early career researchers about his recent grant.

At 10am I have a meeting with a researcher in the school. She is thinking about applying for a grant following a recent funding alert I sent her, which I picked up from a website I check regularly and it seems to be right in her area. We talk about the general plans and costing, I check she knows how to use the pFACT costing tool and I suggest a possible grant mentor within the school.

I just have time to print out some slides for my lecture tomorrow afternoon before my PhD student arrives, together with his co-supervisors, for our regular meeting to discuss his research progress.



Jennie Cripps



Catherine Hobbs

A quick lunch, then I settle down to spend some time preparing for an upcoming meeting of the Technology School Executive group, at which I have to present the updated school research strategy. Just as I am really making progress on this, I get a call from the Research and Business Development Office. A researcher in the school has submitted a project through pFACT which needs university approval by the end of the week, but it has not yet passed through school approval and there are some issues with the costings. In fact I have seen the application in my role as Chair of the school's grant panel, and it is OK scientifically, but the principal investigator has misunderstood something when entering costings onto pFACT. I make a quick call to sort it out, then alert school finance that the project needs approving urgently.

At 2.30pm there is a research seminar by a PhD student from one of the school's research groups. I try to attend these where possible to keep up with what research is going on. It's really interesting getting to hear about the diverse research projects within the school, from the safe dismantling of air bags to markerless motion capture systems.

After the seminar, I remember to send out an email to staff asking for any research news to go into our twice-yearly research newsletter. A number of emails come straight back with details of recent publications and projects. Our research administrator will help me put the newsletter together in a few weeks' time.

There's just time to check my Brookes Virtual module website to make sure that my students are getting on with their regular online quizzes and to remind them that the deadline is tomorrow, then it's time to collect my son from nursery.

#### **Dr Susannah Wright, Research Fellow, Westminster Institute of Education**

It is hard to define a typical day as a research fellow, as my working days are extremely varied in terms of activity and location. I might be in a library or archive, or writing conference papers or articles related to my particular research interests in the history of education in the late 19th or early 20th century. I have some time for my 'own' research as well as supporting research at the institute, or I may also be involved in preparing lectures, teaching, or marking; I have valued my opportunities to gain teaching experience as part of my role.

Primarily, however, my role is to support research at Westminster Institute of Education.

One element of my role is to help organise research events, so part of my day may involve liaising with colleagues to put together a programme of lunchtime research seminars, or to help organise the annual institute research and knowledge transfer conference.

Later on, I might be supporting a research-funding bid. This could involve me working on any stage of the bid: initial discussions of ideas, helping with writing the research proposal, commenting on drafts, working through costings with the institute finance staff and the Research and Business Development Office, proofreading, and finally working through the processes of getting the required institutional signatures, and submission. Having now worked to support a number of bids, to different funding bodies, I realise it is important not to underestimate the time, planning, and patience required!

I might also have some work to do on a funded research project, which is another important strand of my 'research-support' role. This can take the form of occasional contributions to colleagues' evaluation projects. Most of my research project work has been on a large-scale, one-year, multi-institution project but if I am working on the one-year funded project I might again be carrying out a range of tasks. These include constructing interview schedules and questionnaires, telephoning schools and colleges asking if they would like to participate in the project, two-day fieldwork trips, coding data using the NVivo database, writing and proofreading project reports. However, project work can take the form of occasional contributions to colleagues' evaluation projects, so my working day might include visiting a school with a colleague for a focus group with pupils as part of a project evaluation. Added to this are the normal meetings and emails. Juggling the different aspects of this job can be a challenge, but it keeps life interesting!

#### **Dr Paul Whitty, Reader, School of Arts and Humanities**

Since September 2008 I have been Chair of the Arts and Humanities Research Grants Panel. The panel has responsibility in the School of Arts and Humanities for overseeing all bids made to external funding organisations including post-doctoral awards and knowledge transfer.

One of the most recent projects I have worked on for the panel is the launch of the Research Grants Panel Fund. This has been made possible thanks to the support provided for grants panels across the university instigated in 2007. The school has a strong record of success with large-scale funding bids and the Research Grants Panel Fund has been set up specifically to support this and expand the number of large-scale bids being submitted. Researchers can apply to the fund for support with external consultation, meetings with collaborators and partners, workshops and any other activities that will facilitate the creation of the strongest possible applications.

The membership of the panel includes researchers from all areas of the school with a successful record of external funding bids. At present we are in the process of expanding membership to take account of many of the younger researchers who are

developing an excellent record of grant success. One of the most important roles of the members of the panel is as mentors for researchers making applications. As soon as a researcher contacts the panel to indicate that they are planning an application, the school research manager and I assign a mentor to the project. One of the advantages of the inter-disciplinary nature of the panel is that we are able to assign mentors with strong experience of grant success but who will be able to take a non-disciplinary approach to the bid asking difficult questions and challenging assumptions. This is something that is increasingly important with funders like the Arts and Humanities Research Council (AHRC), who are increasingly using broad-based cross-disciplinary panels.

One of the unique challenges facing Arts and Humanities is the sheer variety of research methodologies employed by its staff including performance-research, archival research, text-based research, social research and practice-led and applied research. This means that researchers apply to a fantastically eclectic range of funders including the Wellcome Trust, AHRC, the Economic and Social Research Council, British Academy, Arts Council England; and a whole range of foundations and trusts including the Ralph Vaughan Williams Trust, Scouloudi Foundation and Music and Letters Trust. A real challenge!

One of the first things I did when I started in the post was to visit each of the panel members to talk specifically about mentoring and how they thought the process was working. It soon became clear that Arts and Humanities has a strong mentoring culture and that the experience was a positive one for mentors and mentees alike. Long may it continue!

Susannah Wright



Paul Whitty



# ‘Tell me how to get my 2:1’: students’ experiences and expectations of assessment in further education

Instrumental and mechanistic feedback and ‘coaching to the grade criteria’ is extremely widespread in vocational advanced level courses in further education colleges. Of course, this is undoubtedly motivating because students can raise their grade levels and know exactly what they have to do to improve their work. But it is leading to a very narrow view of what ‘learning’ is and what ‘teaching is for’. We can discern ‘communities of practice’ where students are learning what the criteria mean, and there is strong synergy between them and their teachers. The trouble is, synergy in these communities of practice is narrowly focused!

In addition, teachers regard formative assessment as little more than ‘interim’ feedback on summative assignments, rather than a much broader approach to diagnosing students’ strengths and weaknesses which is embedded into teaching, and provides feedback that engages students with subject content as opposed to just the assessment criteria. They also face dual pressures of accountability and funding targets and student expectations of not doing boring work and having most teaching input around the coursework assignments.

The project suggests some worrying implications for the expectations that growing numbers of students bring with them into higher education. But all is not doom and gloom! Through taking part in our project, teachers were able to extend their insights about what formative assessment was - and was not! They could identify ways, even with all the constraints of an instrumental assessment system and a narrow syllabus, by which they could challenge students’ expectations and broaden their horizons.

By using the concept of ‘learning and assessment cultures’ to identify what aspects of assessment teachers can and cannot influence, the project also offers pointers for effective staff development and initial teacher education, both in further and higher education, around formative assessment and student expectations.

Two publications are in press: Ecclestone, K. (2009) *Transforming formative assessment in further education*, and *Transforming formative assessment in adult literacy, language and numeracy programmes*; both to be published by the Open University Press later this year.

For further details, contact  
[kecclestone@brookes.ac.uk](mailto:kecclestone@brookes.ac.uk)



Kathryn Ecclestone

These are two key findings from a three-year project designed to help teachers in further and adult education improve their formative assessment practices, funded by the Nuffield Foundation, the Quality Improvement Agency for Lifelong Learning and the National Research Centre for Adult Literacy and Numeracy, directed by **Professor Kathryn Ecclestone** from the Westminster Institute of Education. Based on in-depth observations of teaching and assessment practices in a range of level 3 and level 2 courses in vocational subjects, interviews with teachers and students and questionnaire data, the findings bear out those from other studies of assessment in vocational education over the past five years.

## MACIS - Policy options for biodiversity under climate change

The MACIS project (pronounced as in the French ‘maquis’) is concerned with how scientists and policy-makers can work together to predict likely responses by species and habitats to expected climate change and then help them survive, either in their existing or in new locations. MACIS, short for Minimisation of and Adaptation to Climate change Impacts on Biodiversity, is a project funded under the EU Framework 6 Programme.

**Dr Jake Piper** and **Elizabeth Wilson** in the Oxford Institute for Sustainable Development (OISD), School of the Built Environment, were invited to join a bid to the European Commission in 2006 following on from their involvement in the BRANCH programme (Biodiversity Requires Adaptations in NW Europe under a Changing climate). There were a total of 12 partner institutions.

Biodiversity protection is an area of growing importance to European policy-makers, though

economic growth and development continue to put even protected habitats at risk. A series of Directives protect the most important ‘European site’ through a range of designations, and an EC Communication in 2006 talked of ‘Halting the loss of biodiversity by 2010’ (though this is now acknowledged as an impossible target).

The MACIS programme overall set out to improve prediction models for biodiversity dispersal as a result of climate change. We know that species and habitats will tend to move either northwards or upslope in Europe as the continent’s climate warms and changes. By mapping this ‘climate space’ for future decades, it is possible to identify in broad terms where species need to move to.

Modelling work was carried out by partners in Grenoble (CNRS) and Madrid (CSIC), with inputs from SANBI in South Africa, and the Universities of Oxford and Edinburgh. In addition, the partners considered how policies and actions to

either reduce emissions or adapt to climate change, as well as the policies of other sectors, might also affect and even threaten biodiversity.

To investigate policy-related issues, Jake and Elizabeth reviewed European legislation and policy across many economic sectors, reviewing tools which can help in assessing impacts on biodiversity. They also analysed proposed policies and measures to enhance biodiversity protection. This includes safeguarding from development those sites with future potential and climate change related impact assessment and policy analysis.

Elizabeth and Jake are now working on a book for Taylor and Francis: *Climate Change and Spatial Planning*, to be published in 2010. Jake is working with a European Commission Expert Working Group drafting a strategy paper on biodiversity and climate change.

Further information available at:  
[www.macis-project.net](http://www.macis-project.net)

# 'Enabling the creators':

The European Arts Management programme shows the way

by Dr Jolyon Laycock



EAM Partners meeting Krakow, April 2008  
Dr Laycock, second from right

December 2008 saw the completion of the European Arts Management (EAM) programme, a two-year pilot project funded to the tune of €363,000 by the Leonardo da Vinci (LdV) programme of the European Union. Oxford Brookes was the lead partner in this collaboration between ten higher education institutions and vocational training agencies in nine different European countries. The EU Leonardo da Vinci programme meets European social objectives of increasing employability, social inclusion and cultural diversity by supporting collaborative vocational training initiatives among member states.

The objectives were achieved by bringing together universities that offer vocational training programmes in arts and cultural management in collaboration with local government departments and small scale arts organisations in the community and voluntary sector.

There were two guiding principles:

- That the arts can play an essential role in fostering cultural and social integration between different ethnic, linguistic and national sectors of the population at local level, and through European international and trans-national exchange.
- That arts managers carry out an essential function in facilitating and inspiring creative and cultural activities among all sectors of society.

The partnership met for the first time in Oxford during 2005 and the successive partner meetings were each hosted by one of the other partners. New course material developed by the partnership was tested during existing teaching modules within each institution at undergraduate, MA and CPD level.

Dissemination of results and findings – dubbed valorization by the EU – forms an essential element of all LdV programmes. In this case valorization took many forms ranging from participation at the European Network of Cultural Administration Training Centres Annual General Assemblies in Göteborg (2007) and Lyon (2008), to conferences and discussion forums organised by individual partners in their own countries.

The final outcomes of the programme included a book, *Enabling the Creators*, which is a compilation of fourteen articles contributed by all members of the partnership on issues of cultural diversity and social inclusion in vocational training in the field of arts and cultural management and has been published in all eight partner languages. A website, [www.eamp.eu](http://www.eamp.eu), set up during the lifetime of the project will remain active until at least 2012 and is primarily a resource for researchers in the field. It gives access to a wealth of information and case studies of successful projects in the arts, which focus on the arts as a tool for social inclusion.

## DRIVENet forum: How green will our future vehicles be?

Electric cars fuelled debate at Oxford Brookes University on 7 April when experts met to discuss the possible trajectory of future cars over the next 21 years.

By 2030, over one and a half billion cars, vans and trucks could be motoring around the world. During the first DRIVENet event of 2009 car makers, oil company executives and transport and engineering experts gathered to discuss how to power those vehicles while protecting Earth's precious resources. DRIVENet is the Network for Automotive Sustainability based in the School of Technology.

Speakers at the event included Rosemary Albinson from Castrol BP, Brookes' Professor Geoff Goddard and Dick Stimpson of Arup. To end the day, Tom Morrison-Jones of Mercedes Benz brought an electric Smart car for visitors to test drive.

Despite the recessionary blip, the forum heard the car industry is destined only to grow; particularly in countries like India and China. However, electric cars will probably only make up a small proportion of total sales.

'Full electric vehicles face design and engineering problems and there are major issues with the disposal of used batteries,' automotive consultant Max Pemberton told delegates. 'By 2030 liquid fuels are probably still going to account for 90 per cent of new vehicles sales and production,' he added.

Dick Stimpson explained: 'The climate change issue has led to a sudden increase in activity surrounding electric vehicles but it's not clear whether they provide a technological, environmental or economically viable solution.' There are about 34 million vehicles on the UK's roads currently, of which 6,000 are electric. However, as the average car journey in the UK is 13.6 km, concern over mileage before recharging has been overstated, he believed, commenting: 'A huge number of people could get electric cars tomorrow and not see a difference.'

Other issues discussed on the day included battery recycling, the high price of electric cars, greening the national grid and government policy in encouraging ownership of electric cars.

More information about DRIVENet is available at [www.drivenet.org.uk](http://www.drivenet.org.uk)



## Dr Gert Westermann

Sarah Taylor from Brookes' Research and Business Development Office interviews Dr Gert Westermann, Reader in Psychology, School of Social Sciences and Law.

Dr Gert Westermann grew up near the North German coast. He studied Computer Science, Linguistics and Psychology in Braunschweig, Germany, and Austin, Texas, before combining all three in a PhD in Cognitive Science from the University of Edinburgh in 2000. He then worked as a researcher at the Sony Computer Science Laboratory in the Quartier Latin in Paris, where he developed computer models of how children learn their first speech sounds. This was followed by a research fellowship at the Centre for Brain and Cognitive Development at Birkbeck College, London, investigating category learning in infants. Gert joined Oxford Brookes in 2003 and is now Reader in Psychology. When he is not working, he likes to watch European films, learn languages, occasionally play the clarinet and the piano, go to concerts in the Sheldonian Theatre, and wait for the house price crash to reach Oxford!

**Q: What first sparked your interest in your current field of research?**

In fact I'm working in two research areas which at first sight seem quite disparate. One is how people process verb inflections such as the English past tense – how do we know that the past tense of 'look' is 'looked' and that of 'see' is 'saw'? There has been a long debate around this question in cognitive psychology since it touches on larger issues: when we behave as if we are applying a rule (such as in the regular past tense), does this mean we actually have explicit rules in our mind? I think not, and have been working on alternative explanations for some time.

The second field of my research is infant cognitive development: how do babies learn to organise the world around them? And what is the role of language in this process? I have recently set up the Brookes Babylab in the Buckley Building where we study these questions by showing infants pictures of objects on a screen and using an eye tracker to measure how much time they spend looking at them – done correctly, this can tell us a surprising amount about what infants know. By the way, we are always looking for babies to come and participate, so if you have a baby and would like to participate, please get in touch by emailing [babylab@brookes.ac.uk](mailto:babylab@brookes.ac.uk).

How are these two research areas linked? Well, they are both based on the question of how knowledge develops and how brain and environment interact to shape a developmental process that leads to adult competencies.

So, to come back to the question, I'm interested in these fields because I want to find out how much – or little – knowledge is innate, and how children can learn all the complex things we know as adults.

**Q: What is the most recent/current project you are involved in and what particularly interested you about the work?**

In terms of deadlines, this is a book chapter called *Neuroconstructivism* that I'm writing with two colleagues from Birkbeck College for the *Blackwell Handbook of Cognitive Development*. Neuroconstructivism is the name we've given our theory that cognitive development is a trajectory that is shaped by several interacting constraints, from genes and experience-dependent brain development to the growing body and the social environment. It is exciting to work with these colleagues and to clearly explain our theory and discuss its implications.

**Q: How do you see research in your field developing and in what ways will this affect what you do?**

With the Babylab eye tracker, we're at the cutting edge in infancy research here at Brookes, and there are many ways in which this methodology can be exploited to learn more about how infants organise the world around them. In infancy research there is quite a bit of discussion about how much knowledge is innate and if it is not, how it can be learned. In many ways the old theories of Jean Piaget (a famous developmental psychologist) – that children are actively engaged in constructing their world – are coming back and inspire research with new methodologies and paradigms. I hope to contribute to this work over the coming years, using the Babylab and eventually also to use Electroencephalography (EEG) to investigate the brain processes underlying object processing in infants.

**Q: Multi-and interdisciplinary work is increasingly important these days. What other disciplines/subject areas would you like to work with and why?**

Given my background, I'm obviously very much in agreement with interdisciplinary work. My approach and that of many of my colleagues is highly interdisciplinary. I use behavioural testing to observe abilities at certain ages, event related brain potential (ERP) to link these behaviours to brain processes, and computational modelling to develop and test theories of the underlying mechanisms by which an ability develops. A better understanding of development might eventually benefit educational research and I have recently been involved in the first few meetings of the new Centre for Educational Neuroscience in London.

**Q: What are your research plans for the next five years and how does applying for research funding fit within these plans?**

Research is a lot of work and I couldn't get it all done without grant support. Research in the Babylab, for example, has required buying and installing the hardware, maintaining and learning to use new software, planning studies, getting ethics approval, generating a lot of publicity and contacting nurseries and baby groups, getting babies in, keeping up with the scientific literature, writing papers, attending and presenting at conferences and so on. I've had great support from one of our departmental administrators and from an excellent master's student, and from October onwards I have a 16-month Economic and

Social Research Council (ESRC) grant that pays for a post-doctoral student to help with all this and run new studies. In the next five years I hope to expand on this work and apply for further grants to build up a research team and ensure continuity of expertise in the lab.

On the past tense front, my current three-year ESRC grant is coming to an end this year and I'm planning to apply for follow-up funding to study this issue in children with developmental disorders such as Specific Language Impairment, and in cognitive ageing. This would nicely complement the work on normally developing children and younger adults I have done so far and would fit in with the neuroconstructivist approach I'm taking.

**Q: Who do you think has most shaped your research career and why?**

During my first degree I spent a year at the University of Texas at Austin, and since in Germany they wouldn't give me any credit for the courses I took there, I decided to cherry pick. So I took cognitive science and linguistics courses (and clarinet lessons!), and one of them was taught by Risto Miikkulainen on neural networks – computer models that mimic brain function to simulate cognitive behaviour. I thought this was really interesting, and I ended up doing a summer project with him. Ten years later I undertook post-doctoral studies at the Centre for Brain and Cognitive Development at Birkbeck in London. This was a fantastic environment to further develop my ideas with like-minded colleagues and we wrote a book together called *Neuroconstructivism* that elaborates our ideas on cognitive development.

**Q: If you did not have a job in a higher education institute, where would you like to work and why?**

I am very passionate about research. Although I have previously worked outside higher education in the Sony research lab in Paris, I prefer working in a university environment because here it is a virtue to be sceptical and to carefully consider all sides of an argument in order to arrive at more profound answers. The fact that there are few absolute truths often seems difficult to accept outside academia. I'm also passionate about sharing my knowledge with students and challenging them to realise their potential, but if I had to work outside academia I would probably remember that I am a computer scientist by training and get rich!

# Prehistoric human occupation of the Arabian Peninsula: funding for fieldwork in Dhofar

**Dr Jeffrey Rose**, Lecturer in Physical Geography, School of Social Sciences and Law has recently been awarded a prestigious Early Career Research Grant by the Arts and Humanities Research Council (AHRC). The project is scheduled to begin in October of 2009 and will fund three years of archaeological fieldwork in the Dhofar Mountains of southern Arabia.

Dr Rose's project will explore prehistoric human occupation on the Arabian Peninsula – a region that has undergone minimal research, yet is central to the question of



Dr Jeffrey Rose

human origins. Arabia is situated at the nexus of three continents, connecting Africa, Asia, and Europe. As such, this region may have served as an important pathway linking hunter-gatherer groups on different continents throughout the last several hundred thousand years. Indeed, many of the human species' most diverse and ancient genetic lineages cluster in and around Arabia, confirming that the peninsula played a critical role in the evolution and expansion of our species.

That Arabia facilitated periodic hominin expansions is not surprising, given the wildly oscillating climate, which occasionally transformed Arabia's hyper-arid desert interior into expansive savannah grassland incised by perennial rivers and inland lakes. The landscape was further augmented by fluctuating sea levels that episodically dropped below the shallow depths of the Persian Gulf basin, at which times a landmass the size of Great Britain was exposed. Given this cyclical process of environmental amelioration followed by desiccation, it is posited that Arabia acted as a pump by drawing early humans into the interior during favourable wet-phases; conversely, forcing them to contract back into

surrounding refugia at the onset of aridification.

In order to assess the development of prehistoric human occupation in Arabia, the objectives of the project are to:

- Excavate archaeological deposits in the Dhofar Mountains.
- Describe, analyse, and date early human stone tool technologies within the study area.
- Conduct systematic survey of archaeological sites in Dhofar to map the distribution of sites across the landscape.
- Model changing environmental conditions, correlated with the archaeological record, to examine landscape usage over time.

Dr Rose will be joined in the field by a graduate student included in the AHRC grant award as well as other members of the Human Origins and Palaeo-Environments (HOPE) research group at Oxford Brookes University.

## Indian cities – OISD joins Indian experts to investigate sustainability

Rapid economic progress has resulted in the staggering growth and expansion of many Indian cities. Today, a third of India's 1.1 billion people are living in towns and cities. This rapid growth is bringing dramatic changes to the physical form and structure of Indian cities. Moreover the pattern of urban growth, often haphazard and



unplanned, is creating a plethora of social, environmental and economic problems. This includes the widening gap between rich and poor, the prevalence of deprived areas of poor urban quality, an increase in consumption and energy use, endless traffic congestion and poor air quality. Understanding and addressing the problems of rapid urban growth in growing economies like India's, will be key in achieving global sustainability and climate change adaptation and mitigation. To address these problems, it is necessary to understand the pattern of physical growth and its relationship with sustainability in order to develop good practices to deliver effective urban policies.

The Cities Research Unit in the Oxford Institute for Sustainable Development (OISD) is leading CityForm-India – a research network which brings together experts from India, Europe and the US to develop evidence-based strategies to achieve

sustainable growth in Indian cities. This multidisciplinary team of experts includes academic and non-academic partners from the private, public and voluntary sectors in urban development. Partners in India include the National Institute of Urban Affairs (lead partner in India), School of Planning and Architecture (New Delhi), CEPT University (Ahmedabad), Indian Institute of Technology (Delhi and Mumbai), city councils, professional associations and NGOs. International partners include the British Council and the Department for International Development.

Getting started with this groundbreaking research has been no easy task. Given the international and multidisciplinary nature of the research, securing financial support has been the top priority. **Professor Elizabeth Burton, Dr Shibu Raman, Dr Nicola Dempsey** and **Dr Carol Dair** are leading a number of research proposals and research

# The Brookes-Calcutta connection furthers study of metabolic networks

In 2005, Oxford Brookes University and the University of Calcutta signed a memorandum of understanding about developing collaborations in arts and science. The following year, **Professor David Fell** from the School of Life Sciences was contacted by Dr Sudip Kundu, then a Senior Lecturer in Bioinformatics in the Department of Biophysics, Molecular Biology & Genetics, who expressed an interest in collaborating with his research group.

Bioinformatics is the application of computational approaches to the storage, management and analysis of biological data and has assumed particular importance since the explosion of information that has arisen from 'reading' how the genes are encoded in the DNA molecules of living things. A topical area in bioinformatics is characterising the networks of interactions between the molecules in living organisms, and Dr Kundu was interested in learning more about the group's work on metabolic networks. Metabolism is the set of chemical reactions involved in the use of food to provide energy, or to grow and reproduce. The link to bioinformatics is that the representation of metabolism in the genes is deceptively simple: an organism's genes

provide the information for making enzymes that catalyse one or more of the reactions making up the metabolic network. The group's work in metabolism had recently involved inferring its essential characteristics in an organism from information about its genes, and Dr Kundu's proposal aligned well with this work.

In 2007 Professor Fell had started a Biotechnology and Biological Sciences Research Council (BBSRC) project in collaboration with Dr Lee Sweetlove of the Department of Plant Sciences at the University of Oxford to work out the metabolic network of a small, insignificant weed, *Arabidopsis thaliana* (Thale cress). This plant has no agricultural applications; indeed it is said, by those who've tasted it, to be bitter and unpleasant. However, because it is small and has a generation time of only a few weeks, it has been adopted throughout the world as a 'model plant', in much the same way as the tiny fruit fly became a model for animal genetics and development. Accordingly, *Arabidopsis* was the first plant to have its DNA fully characterised, and it was the intention to build and test a model of its metabolic network inferred from the genes detected in

its DNA. The postdoctoral fellow in Professor Fell's group, Mark Poolman, was doing the work as a follow-up to a previous project studying the metabolic network of the bacterium that makes the antibiotic erythromycin.

Professor Fell and Dr Kundu developed a specific project proposal to apply the techniques being used in the *Arabidopsis* project to work out the metabolic network of rice, since its DNA had by then been characterised as well, but they were unable to find any funding to take this forward.

However, all was not lost for at the beginning of 2008, Brookes announced an Academic Fellowship scheme to sponsor research visits for overseas researchers and Dr Kundu's application, specifying the rice metabolism project as the research aim, was successful. Dr Kundu worked with the Bioinformatics group for three months in the summer of 2008. He made rapid progress applying the methods that Dr Poolman had developed in the *Arabidopsis* project to rice, and returned to Calcutta with an initial draft of a large chunk of the rice network completed.

On the basis of this preliminary work, Professor Fell and Dr Kundu were recently successful in securing a four-year BBSRC funded grant, as part of the India Partnering Award scheme and Dr Kundu has also secured the interest of his colleague, Dr Swapan Datta, Professor of Botany, who is a noted researcher on rice. Dr Kundu is planning to return to Oxford Brookes this summer and Professor Fell and his team will visit Calcutta at the end of the year.

The Pro-Vice Chancellor, Professor Suranjan Das, who signed the original memorandum of understanding with Oxford Brookes is now the Vice-Chancellor of the University of Calcutta and will be visiting the university in July to renew the research collaboration agreement.

network proposals to consolidate this international network with some success so far. Drs Raman and Dempsey were recently awarded a grant from the British Council, as part of its UK India Education and Research Initiative (UKIERI). The Ministry of Urban Development in India has committed financial support for members of the UK-India network to conduct a pilot study to identify key gaps in knowledge, test research methodologies and data collection and analysis tools, identify secondary data sources and develop potential strategies for addressing urban growth issues in India. In August 2008, after a year of planning and discussion with partners, CityForm-India organised its first international conference in New Delhi. It was hosted by the National Institute of Urban Affairs. **Professor Jenks**, Dr Raman, Dr Dempsey and **Dr Keivani** from OISD presented papers on urban sustainability, sustainable urban form and urban competitiveness.

Over the next two years, the focus will be on strengthening the network, organising a number of training workshops and researcher and student exchanges between Indian and UK institutions, conducting the pilot study and seeking funding from a range of sources in India and the UK for a wider and more integrated study.

This is an exciting development for OISD: Cities. The research unit is forging new links within academic and non-academic partnerships in India, Europe, the US and beyond, while using the expertise that OISD has in urban form in the context of developing countries.

Professor David Fell



# Are several heads better than one?

## Children's use of social consensus as a cue to reliability when learning new information

**Dr Shiri Einav**, Early Career Fellow in Developmental Psychology, School of Social Sciences and Law, has been awarded £5,551 from the British Academy to investigate whether children make use of social consensus to assess the reliability of novel information.

In everyday life, people must continually weigh up the reliability of new information that is presented to them by numerous social sources in order to avoid being led astray by false claims (eg mistakes, lies). This task is particularly crucial in



Dr Shiri Einav

development as children's knowledge acquisition depends heavily on information that they receive from others. Researchers in cognitive development have recently begun to examine whether young children assess the reliability of informants and display some selectivity in what and whom to believe, rather than show indiscriminate trust in whatever testimony is offered. Moreover, are children sensitive to the same reliability cues that adults attend to?

One such cue is social consensus. In general, adults recognise that testimony that is independently endorsed by several people is more reliable than the potentially idiosyncratic or false belief of an individual. Dr Einav's project aims to investigate the emergence of this awareness in children between three and six years of age. Using an experimental methodology, the following questions will be examined: Are children more likely to learn novel information – a label for an unfamiliar object – that is provided by several informants as opposed to just one? This question is especially relevant for the context of word learning given that language is essentially a conventional construct. In contrast, there are

occasions in real life when it is best to trust the testimony of an individual (eg an expert) above that of less knowledgeable individuals whose consensus could be wrong. A second objective of the project is to examine whether children who attend to social consensus will show flexibility and be more likely to learn information from the individual under such circumstances.

This project will help to shed light on the ways in which children critically assess novel input so that they remain open to reliable new information while filtering out unreliable testimony, thus optimising the learning process. It will also inform our understanding of children's developing epistemological reasoning, and the social factors that impact on children's selective trust in testimony.

Testing for this project will take place in our dedicated child development lab in the Buckley Building, Headington Campus, so if you have a three to six year-old child and would be interested in participating, please do get in touch ([seinav@brookes.ac.uk](mailto:seinav@brookes.ac.uk)).

## Helping to detect alcohol use disorders

**Dr Lesley Smith**, Principal Lecturer in Quantitative Research Methods, and Dr David Foxcroft, Professor of Healthcare Practice in the School of Health and Social Care, in collaboration with Dr Aisha Holloway, Senior Lecturer in Adult Health from the University of Nottingham, have been awarded a grant for £36,000 from the Alcohol Education Research Council (AERC). The grant will fund a systematic review and

meta-analysis of studies evaluating the accuracy and predictive ability of brief alcohol screening questionnaires for detection of a range of alcohol use disorders in a variety of healthcare settings.

Alcohol abuse, or dependence, often goes unrecognised by healthcare practitioners. Yet, early identification is important as alcohol misuse is associated with significant health and social problems. Research has shown that brief interventions delivered in primary care and hospital settings can be helpful in decreasing alcohol consumption in those identified as heavy or problem drinkers. In order to screen people for problem drinking, practitioners need to know what the most effective instrument is for a particular setting and population. The instrument needs to be quick and easy to administer, and identify problem drinkers with a high degree of accuracy (high sensitivity and specificity). Many studies reporting the accuracy of these instruments are available in the scientific

literature but there is a lack of consensus about which instrument is optimal for a particular setting and population group. This review will synthesise the available evidence to clarify the sensitivity, specificity and predictive values of each instrument, so that future Screening and Brief Intervention (SBI) programmes are able to use the optimal instrument according to the setting and population of interest. The studies will also contribute a rich source of data for exploratory analyses to determine the strengths and weaknesses of different methodological approaches of meta-analysis in this newly developing area of research synthesis.

The main outputs from the study will be published research papers, including at least one Cochrane diagnostic accuracy review – a new focus for the Cochrane Collaboration – and reports for dissemination by the AERC.



Dr Lesley Smith

# A new Nursing Research Academy for the UK is launched

The Academy of Nursing, Midwifery and Health Visiting Research (UK) was officially launched on 26 February 2009 at a reception attended by many people from across the professions and organisations. These included the Royal College of Nursing, Royal College of Midwives, Community Practitioners' and Health Visitors' Association, Council of Deans for Health and the UK Clinical Research Facility Network. During the day a colloquium took place bringing together senior researchers, government policy makers, NHS managers, and many others from the four UK countries to consider ways in which collaboration to develop research capacity and high quality research practice can occur.

The prime focus of the new academy is 'to be an expert collaborative voice for all aspects of research involving nursing, midwifery and health visiting in the UK, including policy development, its implementation and evaluation through negotiation and dialogue with other key stakeholders'.

The colloquium's purpose was to inform the future work of the academy by:

- Identifying key challenges to the development of nursing, midwifery and health visiting research.
- Examining policy initiatives to support the further development and sustainability of research capacity building across the profession.
- Celebrating innovative approaches to nursing research capacity building.
- Agreeing key priorities to enhance nursing, midwifery and health visiting research.

Part of the initial work of the academy has been the production of a booklet of 'case studies' of clinical academics who are nurses, midwives and health visitors to demonstrate 'model careers' to those choosing clinical academic careers. **Dr Jane Appleton**, Reader in Primary and Community Care, in

the School of Health and Social Care, was asked to be one of the ten case studies. Another of the Academy's early activities will be to develop a mentorship scheme for clinical nurse, midwife and health visitor researchers.

Further details of the Academy are available at: [www.researchacademy.co.uk](http://www.researchacademy.co.uk)

Jane Appleton



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## News in brief

**Professor Martin Haigh**, School of Social Sciences and Law, has been granted the title of Honorary Visiting Professor in the Centre of Excellence in Natural Resources Data Management (NRDM) by the Vice-Chancellor of Kumaun University, Almora, Uttarakhand, India. This recognition revives a 25 year research link with the Department of Geography that concerned research into environmental change in the Himalayas.

**Professor Jeya Henry and Dr Helen Lightowler** of the Functional Food Centre, School of Life Sciences, have successfully obtained a number of contract research projects for a total of £356,000 from the Belgian Beverage Import Company; Roquette Freres; BENEQ and the British Potato Council.

**Dr Catherine Hobbs**, School of Technology, has been invited to join an advisory group to the Department for Business, Innovation and Skills (formerly the Department for Innovation, Universities and Skills). The Expert Group for Women in STEM (Science, Technology, Engineering and Mathematics) advises the Department and the Science Minister on policy issues and how they relate to women in science.

**Dr Vincent Connelly**, School of Social Sciences and Law, has been awarded a prestigious Leverhulme Trust research project grant totaling £105,560. The project entitled 'Profiling writing in children with specific language difficulties' begins in September 2009 and runs until March 2011.

**Craig Richardson**, School of Arts and Humanities, has been appointed to the Arts and Humanities Research Council (AHRC) as a Peer Review Panel Member for Panel B which covers a range of creative and performing arts subjects including Art, Architecture, Film, Creative Writing, Drama, and Cultural Policy.

**Dr Jim Barnes**, School of Social Sciences and Law, has been awarded a British Academy Small Grant of £7,175. The project entitled 'Visual memory errors in Parkinson's disease patients with visual hallucinations' commenced in February and will run until January 2010.

**Professor William Gibson**, Department of Religion and Philosophy, Westminster Institute of Education, is to edit the *Oxford Handbook of the British Sermon 1689-1901* with Professor Keith Francis of Baylor University, USA. This is a prestigious international project which will take three to four years to complete. The handbook will both summarise the state of the art in pulpit scholarship as well as lay down the broad avenues for future study by theologians, historians and literary scholars. The project will draw together over thirty leading international scholars who will contribute essays on their field of specialism.

**Professor Gary Browning**, School of Social Sciences and Law, has been appointed as a member of the AHRC's Peer Review College. Gary will take up the appointment in January 2010 for four years.

BMW is expanding trials of the electric-powered Mini E to include the UK, with 40 cars being built at the Mini assembly plant at Cowley and

Munich for use in field tests. **The Sustainable Vehicle Engineering Centre** in the School of Technology will provide academic support and analyse the data collected by the testers.

**Dr Helen Dawes**, School of Life Sciences, has been awarded £25,000 by the Primary Healthcare Trust (Thames Valley Local Research Network) for funds to continue her multiple sclerosis research. The award will fund 'Safe Optimal Exercise for People with Multiple Sclerosis'.

**Professor Barrie Axford**, School of Social Sciences and Law, has been reappointed as an International Adviser and Reviewer to the Italian Ministry of Education's Research Grants Programme. He will hold the position for 3 years.

**Professor David Fell**, School of Life Sciences, has been invited to be a member of the Scientific Advisory Board of the Helmholtz Alliance on Health-orientated Systems Biology in Germany. The alliance brings together five systems biology networks in Cancer, Molecular Biology of Neurodegenerative Disease, Toxins and Cell Metabolism, non-coding RNA in regulatory networks and the Human Brain Model.

**Richard Huggins**, School of Social Sciences and Law, has been selected as a C-SAP Associate from September 2009 to July 2010. C-SAP is the national Subject Network for Sociology, Anthropology and Politics and is one of 24 networks within the Higher Education Academy. Associates hold the post for a year and will be able to contribute and have access to resources and networks within C-SAP and the academy.

# New publication

## James II and the Trial of the Seven Bishops

Professor William Gibson, Westminster Institute of Education

Publisher: Palgrave Macmillan

ISBN: 0230204007



The book seeks to restore the religious events of 1685-1688 to a central place in our understanding of the Glorious Revolution. Professor Gibson suggests that the revolution of 1688 would have been far more bloody without the trial of the seven bishops. He reminds us that the invitation to William of Orange was only signed on the evening after the acquittal of the bishops. The trial elicited popular opposition to James in a way than none of the King's other policies did and, by the autumn of 1688, the trial had mobilised a coalition against him. By considering the trial of the bishops as one of the central events of James II's reign, Professor Gibson is able to resolve many of the unresolved historical debates on the Revolution.

# Diary

June – September 2009

## Wednesday 17 June 2009

### Research Methods and Management Training – Research Induction and Networking Event

(re-run of event held in September 2008)

Room BG11, Buckley Building 12.30pm – 4.00pm (lunch provided)

To book a place, please contact [louise.wood@brookes.ac.uk](mailto:louise.wood@brookes.ac.uk)

## Wednesday 9 September 2009

### Alcohol Consumption in Pregnancy: Time to Talk

St Anne's College, Oxford 9.00am – 7.30pm

Further details available at: <http://shsc.brookes.ac.uk/research-events>

Conference fee: £75 (£50 students)

## Thursday-Saturday 17-19 September 2009

### Rethinking Modernity in a Post-Secular Age

Further details are available at: [http://ah.brookes.ac.uk/conference/sacred\\_modernities/](http://ah.brookes.ac.uk/conference/sacred_modernities/)

If you would like to attend as a delegate please contact: [tcrook@brookes.ac.uk](mailto:tcrook@brookes.ac.uk).

The deadline for delegate registration is the end of July 2009.

Details of research training events throughout the year are available on the Research and Business Development Office website: [www.brookes.ac.uk/res/support/training](http://www.brookes.ac.uk/res/support/training)

Details of research supervisory and research student training are available on the Graduate Office website: [www.brookes.ac.uk/brookesnet/graduateoffice](http://www.brookes.ac.uk/brookesnet/graduateoffice)

Details of research seminars taking place in each of the Schools are available at: [www.brookes.ac.uk/res/support/training/seminars](http://www.brookes.ac.uk/res/support/training/seminars)

**Research Forum**, the research magazine of Oxford Brookes University, is published three times a year.

Contributions are welcomed from all sections of the university and should be sent to The Editor, **Research Forum**, The Research and Business Development Office, Oxford Brookes University, Buckley Building, Headington Campus, Gypsy Lane, Oxford, OX3 0BP or by email to [researchforum@brookes.ac.uk](mailto:researchforum@brookes.ac.uk)

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