Research at Reading

Hello, and welcome to the summer 2011 edition of Research Review. Summer is always a busy time for research at Reading, and this year is no exception. We continue to be successful in winning major research grants and contracts from a diverse range of funders, and the page opposite highlights just a few of these.

In June, the Reading Enterprise Centre was opened by the Minister of State for Business and Enterprise, Mark Prisk MP. This new facility builds on the University's excellent Centre for Knowledge Transfer. Colleagues and specifically in developing knowledge transfer, and this year much more information can be found on our website. I hope you enjoy reading about our research in this Review. As always, Research Review can only feature a small selection of our work, and much more information can be found on our website.

Professor Christine Williams Pro-Vice-Chancellor (Research and Innovation)

www.reading.ac.uk/research

New research grants and contracts

Some of the larger recently-awarded grants from November 2010 to November 2011 include:

<table>
<thead>
<tr>
<th>Grant Number</th>
<th>Project Title</th>
<th>Principal Investigator</th>
<th>Funding Body</th>
<th>Value</th>
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<tr>
<td>AHRC</td>
<td>Professor Roger Matthews from Archaeology has been awarded £727,742 for research into ‘Somatisation and resource management in the Neolithic of Western Iran’.</td>
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<td>AHRC</td>
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<td>BBSRC</td>
<td>Professor Ian Jones from Biological Sciences has been awarded £389,719 for a research project entitled ‘Microbial C finishes’.</td>
<td>Dr Mary Lewis from Archaeology from BBSRC</td>
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<td>EPSRC</td>
<td>Professor Peter Grindrod from Mathematics and Statistics has been awarded £171,474 for a research project entitled ‘MOLTON: mathematics of large technical evolving networks’.</td>
<td>Professor Mark Prisk from Mathematics and Statistics</td>
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<td>EPSRC</td>
<td>Professor Robin Hogan from Meteorology has been awarded £354,708 for a research project entitled ‘Changing atmospheric blocking’.</td>
<td>Professor Robin Hogan from Meteorology</td>
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<tr>
<td>EPSRC</td>
<td>Dr John Methven from Meteorology has been awarded £268,508 for research entitled ‘Data mining: an integrated approach to earth system research’.</td>
<td>Dr John Methven from Meteorology</td>
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<tr>
<td>EPSRC</td>
<td>Professor Ian Jones from Biological Sciences has been awarded £406,933 for research into the production and evaluation of foot-and-mouth disease virus stabilised capsids as potent, rapidly deployable vaccines.</td>
<td>Professor Ian Jones from Biological Sciences</td>
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<td>EPSRC</td>
<td>Professor Hugo Tucker from Engineering and Environmental Sciences has been awarded £72,000 for research entitled ‘Unveiling the complex interactions between climate and ecosystem function’</td>
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<td>EPSRC</td>
<td>Professor Chris Reynolds from Agriculture to investigate ‘Biomethane emissions factors’.</td>
<td>Professor Chris Reynolds from Agriculture</td>
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<td>EPSRC</td>
<td>Professor John Goldie from the Institute for Cardiovascular and Metabolic Health has been awarded £174,072 for a research project entitled ‘The virtual plaster – the development of a predictive mathematical model for the complex regulation of platelet function’.</td>
<td>Professor John Goldie from the Institute for Cardiovascular and Metabolic Health</td>
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<tr>
<td>EPSRC</td>
<td>Professor Simon Potts from Agriculture has been awarded £733,762 for research into ‘Adolescence, migration and health in medieval Europe – Phase 2’.</td>
<td>Professor Simon Potts from Agriculture</td>
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<tr>
<td>EPSRC</td>
<td>Professor Hugo Tucker from Engineering and Environmental Sciences has been awarded £145,425 for a research project entitled ‘A study on the effects of Roquette’s NUTRIOSE fiber on satiety and microbiota in humans’.</td>
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<td>EPSRC</td>
<td>Professor James Tait from Systems Engineering for a project entitled ‘Technology Strategy Board’.</td>
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<td>£145,425</td>
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<tr>
<td>EPSRC</td>
<td>Professor Richard Bozarth from Systems Engineering for a project entitled ‘Thermal infrared camera filter and dichroic optical coatings for the earlobe multi-spectral imaging’.</td>
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<td>EPSRC</td>
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INTRODUCTION

2 Research Review

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The effects of climate change on water scarcity

Researchers from the Walker Institute for Climate System Research have demonstrated that there is strong agreement across different climate models that climate change will cause water scarcity in some regions, such as Western Europe and the Mediterranean. This means that drought conditions, such as the growing problem in the UK and Europe this year, will become more frequent. Uncertainties associated with the representation of various physical processes in a global climate model mean that there is always uncertainty in any one set of predictions of the impacts of climate change. To investigate this uncertainty, the scientists used an ensemble of 189 simulations. This paper was awarded the best climate change paper in the Lloyd ‘Science of risk’ prizes.


Construction procurement policies, strategies and procedures

Professor Will Hughes from Construction Management and Engineering is a co-author of a new code of practice ‘BS 8534: Construction procurement policies, strategies and procedures’. The main purpose of the standard was to pull together into one document all of the various best practice guidance that has been issued by many different organisations over the years. The code of practice builds on previous research from the University, which has enabled the development of a robust and practical approach to the analysis and description of procurement processes. This forms a useful starting point for thinking about how to organise the complex processes which are involved in construction.


Professor of Near Eastern Archaeology joins the Department of Archaeology

Roger Matthews, Professor of Near Eastern Archaeology, joined the Department of Archaeology in January 2011. Professor Matthews will be assisted by Dr Wendy Matthews and a team of four researchers, will be leading the four-year project Sedentism and Resource Management in the Neolithic of Western Iran.

For more information, please see: www.czap.org

New editor on campus

Dr Simon Sherratt from Systems Engineering has been appointed as Editor-in-Chief of the journal IEEE Transactions on Consumer Electronics. He is the only third editor in the journal’s 57-year history. The IEEE is the world’s largest professional association for technology and has over 300,000 members. The IEEE is split into technical activities with 38 societies (ranging from aerospace to vascular technology), standards activities (for example Wi-Fi is an IEEE standard that most people are aware of to connect wirelessly to the Internet) and regional activities (such as local events).

Faculty Output Prize

Each year, the University awards Faculty Output Prizes for the best research outputs from each of the faculties, and these are funded through the Research Endowment Trust Fund. This competition was created to acknowledge the continuing importance to the University of high quality research. The best research output in Science was awarded to Dr Gudrun Muelder from Human and Environmental Science for her publication ‘The Headless Romans: multi-isotope investigations of an unusual burial ground from Roman Britain’.


Life Sciences news

University welcomes new Professor for Global Food Security

Professor Peter Gregory, previously Dean and Pro-Vice Chancellor at the University until 2005, has been appointed Professor of Global Food Security. The appointment is a joint venture with East Malling Research (EMR) where Professor Gregory has also become its new Chief Executive. In his new role Peter Gregory will spend four days a week at EMR and the remaining day at the University of Reading working with Reading’s new Centre for Food Security and its Director, Professor Richard Tiffin.

Leading evolutionary biologist elected to Royal Society Fellowship

Professor Mark Pagel from Biological Sciences has been elected to the Fellowship of the Royal Society. The Royal Society is the world’s oldest scientific academy in continuous existence, and was founded in 1660. The Royal Society citation read: ‘Mark Pagel is distinguished for having shown how a combination of phylogenetic trees of species and knowledge of their features can be used to reconstruct the evolutionary past and how it gave rise to the present. He has introduced novel statistical modelling techniques that provide solutions to outstanding problems of trait evolution. These solutions have influenced how evolutionary biologists and anthropologists conduct their science and the evolutionary questions they test. He has used his approaches to address and solve questions of fundamental importance involving speciation, adaptation, punctuational evolution and human cultural and linguistic evolution.’ In addition, Professor Pagel has recently been awarded £1.8 million from the European Research Council to continue his work on the evolution of human languages. The project will search for evidence of the mother tongue of all languages across the world. It aims initially to reconstruct the history of language dating back 15–20,000 years, eventually building up a picture of how our 7,000 living human languages evolved.

Faculty Output Prize

The best research output in Life Sciences was awarded to Professor Howard Colquhoun from Chemistry for his publication ‘Sequence-selective assembly of tweezer molecules on linear templates enables frameshift-reading of sequence information’.

The paper reports a groundbreaking approach to information processing at the molecular scale. While many research groups around the world are attempting to exploit biological machinery based on nucleic acids for artificial information processing, this team has shown for the first time that many of the features of biological information processing can be reproduced in synthetic polymer chains.


New training scheme to sustain the future of food quality and health

The University of Reading is one of the lead partners in a major scheme to ensure the agri-food industry has the key skills needed to meet the challenges posed by national and global food security. Reading has been selected as the lead institution by the Biotechnology and Biological Sciences Research Council (BBSRC) to run an Advanced Training Partnership on food quality and health.

The initiative brings together more than 20 foremost industry partners, including Coca-Cola, Waitrose, Mars and Marks & Spencer, who will work with the University to develop the skills needed to support the production of quality food from farm to fork. Reading will be working with the University of Birmingham, Leatherhead Food Research and Rothamsted Research to deliver a flexible programme of teaching and training. A key aspect of the scheme is a new Professional Doctorate to be taken by researchers currently working within food and agricultural industries. For more information please see: www.bbsrc.ac.uk/atp

Research provides hope for those with epilepsy

Epilepsy affects around 1% of the global population, and approximately 30% of people with epilepsy have seizures which are not controlled by conventional anticonvulsant drugs. Moreover, these drugs are associated with significant motor and cognitive side-effects that adversely affect the quality of life of individuals dependent upon their daily use.

Researchers from Pharmacy and Psychology have been awarded a £1 million grant from GlaxoSmithKline and Ono Pharmaceutical Co. Ltd to investigate whether individual compounds derived from cannabis, known as cannabinoids, could provide a solution to some of these difficult to treat seizures.

Successful results from recent studies have shown that three different non-psychoactive cannabis extracts could provide a solution to some of these difficult to treat seizures. During the next few months, Reading researchers will be completing pre-clinical work which could enable the start of human trials.

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**Student experience**

Dr.s Carol Fuller and Tony Macfadyen from the Institute of Education are working on a project funded by Progress South Central, which aims to give an insight into and an understanding of how students with non-traditional academic profiles experience university life. It is exploring students’ experiences of university in depth, but with a particular focus on the learning experience, sources of support, the social side of university and how previous educational experience, training or employment has prepared students for academic studies and ‘student life’ in a traditional university.

**Legal issues of nuclear cooperation**

The final workshop examining the legal issues relating to the recent nuclear cooperation agreement between USA and India was held in Chennai and Delhi in March and April 2011. This forms part of an ongoing three-year British Academy funded project led by Dr Robert Barnidge from the School of Law and Dr Ambedkar from the Law University in Chennai, India.

**Electoral reform in the UK**

In April 2011 Dr Alan Renwick from Politics and International Relations gave a lecture on ‘UK Electoral Reform in Comparative Perspective’ at the Annual Conference of the UK Political Studies Association which took place in London. In connection with his work on electoral reform, he was asked by the UK Political Studies Association to write a media briefing paper on the Alternative Vote electoral system.

The paper, which was produced in consultation with many of the world’s leading electoral system experts is available at: [www.psac.uk/UPS/Pubs/TheAlternativeVoteBriefing/Paper.pdf](http://www.psac.uk/UPS/Pubs/TheAlternativeVoteBriefing/Paper.pdf)

**Mongolian script: from metal type to digital font**

Dr Jo De Baerdemaeker has recently started his Leverhulme Early Career Fellowship in the Department of Typography & Graphic Communication. During this two-year research project, Dr De Baerdemaeker will investigate the evolution of printing Mongolian characters and will offer practice-oriented guidance in designing and developing new digital fonts for the traditional Mongolian script. This Fellowship will also enable the development and design of a database to facilitate the comparison, characterisation and classification of individual Mongolian typefaces. The database will provide additional contextual information on their typographic use and visual, historical and theoretical analyses of Mongolian typeforms. It aims to provide a resource for scholars of Mongolian language and culture, historians of print, professional (typeface) designers, software developers, librarians, linguists, academics, and to all those who have an interest in non-Latin typography and typeface design. For more information, please see: [www.mongoliantype.com](http://www.mongoliantype.com)

**Celebrating the Reading aulos**

The aulos in the Ure Museum in Reading is a rare example of a popular musical instrument from Ancient Greece. The museum was delighted to host an international colloquium in its honour on 27 March 2011, attracting scholars from the UK, Austria, Belgium, Greece, Italy, Japan, and the United States. Presenters on this occasion included Amy Smith, Sterios Psarasoulakes, Stefan Hagel, Helen King, and Ewen Bowie, and the convenor was Ian Rutherford. A short video, giving an impression of both the event and Dr Hagel’s musical performance on that occasion, can be found on the Classics YouTube channel ([www.youtube.com/user/ClassicsUniv/698](http://www.youtube.com/user/ClassicsUniv/698)).

**International performance for unique art concept**

A member of the University’s Department of Art has taken her work across the world to Canada to perform a unique rock opera based on agriculture and food production. Susanne Clausen, a Reader in Fine Art, performs as Sniper Gallery with Pavlo Keresty and in addition to rock opera, the pair has also brought a curated exhibition and spectacular video installation to the Mackenzie Art Gallery in Regina.

Originally developed for the University’s Museum of English Rural Life with the participation of Michele Sereda (of Curtain Razors), the Mackenzie exhibition entitled Bullet, marked the Canadian premiere for this unconventional response to agricultural realities in May 2011. Ms Clausen said ‘We are delighted to be back in Canada to work on this ambitious new commission. Bullet started with research in the MERL archives and has now taken us to many different other places. The connection with Canada and Regina especially is very relevant to this project. Regina is the capital of Saskatchewan, a province well known for its agricultural history. The Mackenzie Art Gallery not only is a renowned contemporary art gallery, but it also has a major collection of Canadian rural art.’

In order to contextualise the new video installation and performance I have curated a new exhibition, which includes works from the Mackenzie collection as well as from MERL archives and from our own sources.’

The exhibition will be on view in Canada until September and has been supported by the Canada Council for the Arts, the Saskatchewan Arts Board, the City of Regina Arts Advisory Committee and the British Council.

**Languages at War**

A major conference ‘Languages at War’, organised by Professor Hilary Footitt from Modern Languages and European Studies took place in April 2011. It was a major success, with 12 countries represented as well as the Ministry of Defence, Supreme Headquarters Allied Powers Europe, the British Council, the Interpreters’ Association, and a range of academic disciplines (including history, international relations, socio-linguistics, art history and translation studies). At the end of the conference, speakers agreed to set up a research network, and Palgrave Macmillan announced that they had decided to start a ‘Languages at War’ book series. Professor Footitt will be one of the editors of this book series, and there will be three books a year.

For more information, please see: [www.reading.ac.uk/languages-at-war](http://www.reading.ac.uk/languages-at-war)

**Faculty Output Prize**

Each year, the University awards Faculty Output Prizes for the best research outputs from each of the faculties, and these are funded through the Research Endowment Trust Fund. This competition was created to acknowledge the continuing importance to the University of high-quality research. The best research output in the arts and humanities was awarded to Dr Rebecca Bullard from English Language and Literature for her publication ‘A bright celestial mind: a new set of writings by Lady Dorothy Browne’.

The article makes a highly significant discovery in the field of early modern studies. It brings to light for the first time the work of a previously unknown writer, Dorothy Browne, the wife of Sir Thomas Browne – one of seventeenth-century England’s most prominent natural philosophers.

Business news

Housing and older people

Michael Ball, Professor of Urban Property Economics within Real Estate and Planning, recently presented the result of an independent piece of research at the House of Commons about older people and housing. This research has been published by the University as a report titled ‘Housing markets and independence in old age: expanding the opportunities’. It highlights that there are only 100,000 specialist private retirement homes in the UK, yet by 2033, there will be an extra 3.5 million older households aged over 65 years, a 60% increase on today. Without suitable and affordable accommodation, these demographic changes could result in significant housing problems for the older population.

The report has received considerable media coverage and is helping to raise this important issue on the political agenda. The report is available to download here: www.henley.reading.ac.uk/web/FILES/RP/HousingMarketsinOldAge.pdf

International business takes centre stage at conference

More than 100 guests attended a conference in April 2011 on ‘the troubled relationship between theoretical and empirical research’. The conference was hosted by the John H. Dunning Centre for International Business, and was sponsored by Henley’s Huck Centre for Management Research and the School of Economics’ Centre for Institutional Performance. James Zhan, Director of the United Nations Conference on Trade and Development Division (UNCTAD) on Investment and Enterprise, delivered the keynote speech which highlighted that development must be centre stage in investment policy-making, nationally and internationally, to ensure benefits for all. The John H Dunning Centre has entered into a strategic partnership with UNCTAD and will co-host an annual conference linking research with the business and policy agenda both at home and abroad.

For more information, please see: www.henley.reading.ac.uk/news/mgmt-researchcentres.aspx

Faculty Output Prize

The best research output from the Henley Business School was awarded to Dr George Alexandridis from the ICMA Centre for his publication ‘Gains from Mergers and Acquisitions Around the World: New Evidence’. The evidence documented in this publication fundamentally changed the way we think about whether mergers and acquisitions create value for shareholders, one of the most voluminous research areas in finance.


Insect pollinators and food security

Professor Simon Potts from Agriculture has been working on the importance of insect pollinators for our food security. Many of the world’s most valuable crops, including apples, coffee and tomatoes, are pollinated by insects. The total monetary value of insect pollinators to crop production in the UK alone is estimated at £430 million per year. Professor Potts’ most recent research suggests that the majority of this value is derived from wild pollinators and not honeybees, as previously thought. This will help direct new developments in farm and landscape management to secure effective pollination services for food production.

Meet Professor Hugo Tucker, Dean of the new Faculty of Arts, Humanities and Social Science

Why are the two faculties merging? This merger comes as a result of the overall re-shaping of the University, reducing the number of faculties from five to four, in order to rationalise and render more effective the management structure of the University. In the case of our new faculty this will maximise opportunities within it for interdisciplinary collaboration in both teaching and research, across the range of Arts and Humanities and Social Science. This rationalisation and integration should also help encourage broader research collaborations beyond the faculty, and with partner institutions in the UK and abroad.

What sort of changes will be taking place? The new, merged Faculty will result in the largest faculty in the University, comprising six schools, some 245 academic staff, and about 4,700 undergraduate and postgraduate students. In coming together in this way, it will also give birth to a newly merged School of Politics, Economics and International Relations, as well as streamline the existing joint management structure of the two faculties under a single Dean. Within this structure there will be a Faculty Director of Research, two Faculty Directors of Teaching and Learning, with remits in Arts and Humanities and Social Science respectively, and a single Faculty Management Board, Research Board and Teaching and Learning Board.

Will this have an impact on the depth and breadth of research? Do you think it will benefit research across the Arts, Humanities and Social Sciences? Inevitably, this should lend us opportunities for increasing research focus and strength, as well as developing new or nascent areas of research at the disciplinary boundaries. Research activities hitherto conducted separately in separate faculties can be drawn together within a single faculty umbrella. For example research in applied linguistics has in the past been represented in both faculties: other synergies exploited might be those between politics and history, or between politics and economics. The new enlarged Faculty should also serve as a platform for encouraging collaboration in the social sciences from across the University. The schools of each side of the new Faculty will have an increased opportunity to share ideas and experience, particularly in the development of new research projects and bids for external funding, as well as to share best practice in research management. This should also increase opportunities for cross-disciplinary PhD supervision, as well as the provision of Masters courses (a new course in Public Management) and joint undergraduate degrees. All of which will be important elements in enhancing the competitiveness and internationalisation of the University.

How will you encourage collaboration? I would like to encourage research collaborations across the new Faculty and beyond, by promoting activities such as research workshops at faculty level, and identifying, with schools, broad faculty-wide research themes with the potential for internal and external collaborations.

Do you think that this new structure will help foster research which will overcome some of the funding challenges the sector is likely to face over the next few years? In the coming period of change and challenge for Higher Education, we face an increasingly competitive funding climate for research, both in the Arts and Humanities and in the Social Sciences, as well as, in parallel, the challenges of the new fees regime for undergraduates, and the need to establish an internationalised identity. By its size, breadth, and new disciplinary configuration, the new Faculty will be better placed to meet those challenges, by pooling resources and expertise to create new synergies. In particular, this should enhance opportunities for multidisciplinary and interdisciplinary research in order to attract large-scale research funding, in collaborative grant bids from the funding councils, across councils, and for identifying new sources of funding.

What will you be doing in your first few months as Dean of the new Faculty? I shall be listening to the schools within the Faculty, and learning how they each operate. This will help me to understand their concerns, needs and aspirations, and identify with them the best ways to coordinate these, within the new faculty structure. This should help us harmonise our initiatives, lending them new direction and impetus, in response to the immediate challenges in the HE sector in general, and those faced by the University of Reading.

What next? Rebuilding society post-recession

Professor Brian Scott-Quinn, the Chairman of the ICMA Centre for Financial Markets at Henley Business School, discusses financial crises and where regulatory capture is to blame.

The crisis in the banking system which commenced in 2007 has caused most people to wonder what caused the problem. Even the Queen asked some economists who were visiting the palace why they could not have predicted it since they should have been able to know what indicators to look for in advance. While here at the Henley Business School’s ICMA Centre we are researching the more arcane issues such as how to model financial risk better in future and how to calibrate liquidity requirements for financial institutions, the much more general questions that need to be answered are ‘what caused it and who is guilty?’.

In trying to find a root cause, we might simply say that it was sub-prime mortgages, or we could blame statistical modelling and risk management failures. But this is not a sufficient explanation. All financial crises have different causes ascribed to them, yet in fact they all seem to have one thing in common – the symbiosis between bankers, regulators and governments.

So what about the regulators? Banking and nuclear power are the most regulated industries worldwide simply because they can both have meltdowns. I would suggest that it was ‘regulatory capture’ that led to the financial crisis, just as it did in the nuclear crisis. By that I mean that the regulators were too close to the nuclear power industry, probably did not ask this but preferred not to act on it; had they done so they would have been blamed for damaging economic growth prospects. Indeed in the case of RBS it had a declared objective to become the world’s largest bank, and it nearly achieved that goal, but fell at the last hurdle. So our conclusion would be that regulators need to pay much more attention to the signals arising from the business strategy of a firm, and to ask why a firm is seemingly growing much faster than its competitors. In the answer to this question regulators may find the financial institutions they have to rein in. The next problem, of course, is how we will rein in governments who overspend and cause sovereign debt crises. That is, unfortunately, a much more complex issue.

For more information, please see: www.icmacentre.ac.uk
What next? Business strategy

Professor Alan M Rugman, from International Business and Strategy at Henley Business School, discusses the role that business strategy plays in post-recession recovery.

What is the impact of the 2008 international financial crisis on British business? The answer requires an understanding that Britain is part of an integrated global economic system, characterised by strong competition between businesses based in the home regions of the triad markets of Europe, North America and Asia. The financial crisis was a largely macroeconomic event in which the financial markets of Europe and North America were massively disturbed. This led to a cyclical downturn of economic activity in these regions. In contrast, business activity in Asia has leapt ahead, especially in China and India, yielding a relative increase in competitiveness for Asian firms relative to those from Britain, Europe and North America.

British business is trapped within this reality of triad-based global competition. Strategies in a post-depression world should aim to help recover Britain’s international competitive advantage. This will not be easy. In manufacturing, the horse has long ago left the stable finding fresher pastures in China. In information technology there has been offshoring of service activity to India, as anyone enquiring about train times will realise. The pre-depression shining light in Britain, its financial services sector, has now been quasi-nationalised, with all the attendant inefficiencies of state interference, inefficient management and a lack of new initiatives.

The highly regulated British public service sectors including education, health and social services, and local government, all continue to stifle entrepreneurial activity. The legacy of the international financial crisis in terms of British banking and industry bailouts has led to an unsustainable budget deficit now being addressed by large cuts in public spending. The unemployment and disguised unemployment in both the private and public sectors, with rising social problems, is likely to continue in a low-growth economy. This gloomy British picture stands in sharp contrast to the high growth rates in Asia.

What business strategies and public policies can be adopted to recover and improve the relative competitive advantage of Britain? It is clear that there are three ways to proceed in order to improve Britain’s international competitiveness.

First, the role of the government as a regulator must change to become a facilitator. Government needs to work hand in hand with business to redress years of public sector inefficiency covered up by the Blairite housing boom and unsustainable growth in the financial services sector. Neither of these sectors is likely to fully recover in a low-growth economy.

Second, the crippling burden of taxation, both personal and corporate, needs to be removed in order to encourage individual entrepreneurial activity. This, of course, would help to revive small- and medium-sized businesses, but it can also apply to larger firms and to the public sector.

There cannot be social progress without an efficient business sector. Third, educational and social policy also needs to progress in an efficiency-based manner. As Asian firms outgrow British ones, new challenges arise which can only be met by new thinking. This thinking needs to be driven by an awareness that British education and public sector programmes can no longer be benchmarked against those of faster growing competitors in Asia.

In summary, British business strategy needs to be designed and implemented from a worldwide perspective. The rising wave of British regional economic expansion within the EU has foreshadowed the trends of the recession. Somewhat fortunately, the recent international financial crisis is probably of a cyclical nature. As the financial sector and business activity pick up, there will be opportunities for the business and public sectors to forge new partnerships based upon efficiency-driven thinking.

Recent academic research indicates that Britain can enhance its international competitiveness relative to Asian rivals by such a combination of private-public sector initiatives. These need to be based on better managerial practices and relational contracts in which social networks can help to promote efficiency and economic growth. This research on international competitiveness is a key focus within the new International Business and Strategy unit of the Henley Business School.

For more information, please see: www.henley.reading.ac.uk/management

What next? Property development

Professor Neil Crosby, from Real Estate and Planning at Henley Business School, discusses how the policy and practice issues in sharing property development gains between the landowner, developer and the community, triggered by the property market downturn, are actually present wherever market cycles exist.

Since the introduction of the first Town and Country Planning Act in 1947, various attempts have been made to ensure that landowners contribute to the community a proportion of the financial surplus generated by the grant of planning permission. In recent years, this has taken the form of planning obligations that include, amongst other things, the provision of affordable housing. However, the recession of the late 1990s and early 2000s has provided new challenges that Britain can enhance its international competitiveness relative to Asian rivals by such a combination of private-public sector initiatives. These need to be based on better managerial practices and relational contracts in which social networks can help to promote efficiency and economic growth. This research on international competitiveness is a key focus within the new International Business and Strategy unit of the Henley Business School.

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This area of study has become a major topic of research for the School of Real Estate and Planning. One of the projects that members of the School are currently working on is studying development viability in the planning system. This is being led by Professor Patrick McAllister and Dr Peter Wyatt, and is funded by the Economic and Social Research Council. So far, a number of problems with the current system have been identified, and research can play a fundamental role in finding solutions for these.

The research has identified a set of issues related to the model which is currently used to identify development viability. Although the model mimics other pricing models in economics and finance, it has been developed outside of this conceptual framework and so makes a number of basic errors. Therefore a new model needs to be identified and developed. Furthermore, there are problems with the use of the model to identify and justify planning obligations. Due to variations in the capacity of development sites to generate the financial surpluses required for planning obligations, it is clear that policies which do not take into account the individuality of site conditions or market movements will not deliver their objectives.

We are currently involved with the Royal Institution of Chartered Surveyors, the leading institutional body for property professionals, in drafting guidance notes for members and others including planners involved in this process. The ongoing research taking place within the School on issues of a major opportunity to impact on both government planning policy and property industry practice. For more information please see www.henley.reading.ac.uk/rep/research
Minority identities: rights and representation

Dr Alison Donnell, from English Language and Literature, discusses a new cross-disciplinary research theme which explores what happens where issues of rights meet those of representation.

In an article for The Guardian, entitled ‘My England,’ the acclaimed black British novelist Andrea Levy admitted, ‘Identity? Sometimes it makes my head hurt – sometimes my heart. So what am I? Where do I fit into Britain, 2000 and beyond?’ Levy’s words and questions convey much about the complicated pasts and presents of minority identities. ‘Minority identities’ is a term that speaks to communities of cultural distinctiveness, often subject to social disadvantage and exclusion. Yet, the term can also be used to conjure ideas of otherness, illegitimacy, even of threat.

Often, minority identities are marked by migration and a geographical displacement that can be traced to an imperial past. A minority status can also be assumed on the basis of visible difference and the racial associations that follow. Sometimes minorities are positioned outside national identity on account of assumed differences even when minorities experience themselves as insiders. Increasingly, faith identities need not be experienced as other, strange or threatening. The question of what identity need not be experienced as other, strange or threatening. The question of what minority identities need not be experienced as other, strange or threatening. The question of what minority identities need not be experienced as other, strange or threatening. The question of what minority identities need not be experienced as other, strange or threatening. The question of what minority identities need not be experienced as other, strange or threatening. 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Research across Africa

Peacebuilding in Africa
Region: Africa
The School of Politics and International Relations is involved in a major international research project to examine the effectiveness of peacebuilding exercises. The project, entitled ‘Power after peace: the political economy of post-conflict statebuilding’, has been supported by the Carnegie Corporation of New York. One of the key insights gained is that while international interventions often end the fighting, and on the surface reform the institutions of the state, the underlying political and economic structures that fuelled conflict in the first place often remain largely untouched.

Helping children to read in their own language
Region: Africa
Although teaching children in their mother tongues has previously been shown to give the best educational results, they are often taught to read in former colonial languages due to a lack of learning materials in African languages. Research by the National Centre for Language and Literacy at the Institute of Education, and funded by the Leverhulme Trust, has been investigating the conditions which are needed for African language publishing to thrive. This has helped the development of practical recommendations for ways forward which place responsibility on both policymakers and publishers.

Supporting food security research
Region: Africa (inc. Mali, Burkina Faso, Niger, Tanzania, Mozambique, Malawi, Uganda, Kenya and Ethiopia)
The Statistical Services Centre has been awarded a grant of one million US dollars to provide research methodology support to the Collaborative Crop Research Programme (CCRP) of the McKnight Foundation. The CCRP seeks to increase food security by building capacity in a way that is consistent with local cultures and the maintenance of the ecosystem’s health. A toolkit of resources and publications is being developed to support building capacity among research projects. Resources developed are available to researchers throughout the world as public materials.

Managing ecosystem services in smallholder farms
Region: Kenya
In order to better manage the wider landscape, to support beneficial insects and meet growing food security demands, scientists from Agriculture, Policy and Development have been investigating how farm practices and the structure of the surrounding landscape contribute to food production in East Africa. This work contributes to the wider issue of reconciling the often conflicting demands of food production and biodiversity conservation.

Mother and infant relationships
Region: South Africa
Researchers from Psychology and Clinical Language Sciences are investigating the quality of mother-infant relationships in poor communities in South Africa, the implications that this might have for child development, and whether the delivery of interventions developed in Reading and modified for the local environment can help.

Additional work in collaboration with local universities is developing training for mothers in infant book sharing. This has the prospect of being of major significance to child cognitive and language development in South Africa and similar contexts.

How do children and families negotiate illness, loss and poverty in their lives?
Region: Eastern Africa (inc. Tanzania and Uganda)
Research from Human and Environmental Sciences is seeking to identify the key issues and challenges which need to be addressed if policy, services and interventions for children and families affected by chronic illness, and those experiencing poverty, disability or the loss of a family member are to become more responsive to their needs. This is being done in partnership with non-governmental organisations and academics in a number of countries in Africa, and the findings are disseminated to research participants, policymakers and practitioners.

‘Our research is truly international and we are involved in partnerships and projects all over the world. Here is a small selection of our current research within the continent of Africa.’
Professor Steven Mithen, Pro-Vice-Chancellor (International and External Engagement)

Helping small-scale dairy farmers to control brucellosis
Region: Zimbabwe
The Veterinary Epidemiology and Economics Research Unit is working with local nurses and veterinary livestock technicians in Zimbabwe on an education programme for small-scale farmers and their families about the dangers of brucellosis, a debilitating cattle disease which can be passed on to humans. The project, funded by the Wellcome Trust’s Livestock for Life initiative, works with dairy cooperatives teaching them how to prevent and control the disease.
Meet the research team

Five members of the platelet research team, who work on cardiovascular disease, talk about their research interests and what they have been doing this week.

Professor Jon Attenbur, Group leader

My main research interest is in working out how platelets (tiny blood cells) trigger blood clotting when we cut ourselves. This is important because clotting can also occur inside diseased arteries, resulting in a condition known as arterial thrombosis, which causes heart attacks and strokes. We hope that research from my lab will lead to the development of better medicines for the prevention of these thrombotic diseases.

My week began with the submission of an application for funding to the Medical Research Council to continue an exciting project that is underway in the lab. Later in the week I will be spending a day at the British Heart Foundation as a member of the board that decides which areas of research to support and treat cardiovascular disease.

Joe Dunsby & Dr. William Kaiser, Post Docs

We are producing a series of models of platelet activation. Present work looks at the early events in this process and we have produced a model that utilizes ordinary differential equations to describe the behavior of the signaling pathway. We then use asymptotic bifurcation theory to analyze the model.

I (Will) have been comparing the activities of specific platelet signalling proteins after stimulating platelets through the collagen receptor, GPVI. On the side, I’ve been trying to measure the levels of a new hormone (with cardiovascular activity) from cultured cells.

Meline Kriek, PhD Student

I am keen to extend my knowledge and experience in the area of hemostasis (blood clotting) with a particular focus on platelet biology. This is an area of considerable scientific advance in recent years, with the potential to offer substantial future benefits in the prevention of diseases such as thrombosis.

I am measuring the expression of specific receptors on the surface of platelets using a technique known as flow cytometry. I am also looking at the ability of platelets to drive clot formation, which play an important role in the final stage of thrombus formation.

Nelina Kriek, Research Technician

I am interested in the molecular mechanisms that fine-tune platelet clumping, the initial step in blood clotting. A better insight into these mechanisms may help us to understand which factors predispose individuals to developing thrombosis and cause differential responses to anti-thrombotic therapies.

This week I am investigating if certain proteins within platelets are modified upon platelet activation and if this targets them for degradation or alters their interactions with other proteins. To do this, I have isolated protein complexes from platelet extracts, separated them and identified their components using specific reagents.