

<p>Institution: University of Warwick</p> <p>Unit of Assessment: A4 Psychology, Psychiatry and Neuroscience</p> <p>a. Context</p> <p>The Psychology Department implemented a major impact-focused strategic reorganisation and expansion in 2012, following an extensive external review and supported by a substantial University investment. The aim — already successfully met — was to leverage our existing expertise and research strengths more effectively to develop and enhance the impact and external relevance of our research. Three new research groups have been formed, with 6 new academic appointments already made in 2013 specifically to strengthen and enhance the visibility of all three groups. The Lifespan Health & Wellbeing Group emphasises translational research bringing basic findings in longitudinal epidemiology and experimental psychology into clinical practice and health policy; the Behavioural Science Group applies core cognitive principles and models to commercially-relevant areas of real-world decision-making such as consumer choice; and a key aim of the Language & Learning group is to impact classroom language learning. Our research has proved relevant to a diverse range of audiences in education, business and industry, and health-related fields.</p> <p>Business and industry: Our theoretical work on the cognitive science of consumer judgement and decision-making has achieved impact particularly in the retail sector and financial services (e.g. through formation of a spin-out company: Case Study 1).</p> <p>Media: Researchers regularly give interviews to the local and national press (TV, newspaper and radio), and increasingly use social media and podcasts to reach a wider audience, enhance public understanding, and bring our research to the attention of potential users.</p> <p>Education: The research of the Language & Learning Group has impacted directly on the teaching of literacy in schools (Case Study 3).</p> <p>Government policy: The research of all three Groups has informed debate on government policy and led for example to changed healthcare recommendations in Europe (Case Study 2).</p> <p>Public services: Research in all three research groups is relevant to — and has had an impact on the activity of — a number of public services including educational practice, police driver safety training procedures, and public health care policies.</p> <p>b. Approach to impact</p> <p>In the period 2008-2013 we have moved along a trajectory from excellence in “pure” experimental and theoretical psychological research, through identification of the need to enhance our impact and to become more outward-facing both for the public good and in order to maintain and increase levels of support for our basic research, to a major reorganising and re-focusing of the Department’s research in 2012. Excellence in research — and in our research outputs — will always carry our highest priority. However, as evidenced by recent large grant awards, we are unusually well placed to exploit the fact that external developments (e.g. the popularisation and increasing political awareness of behavioural economics and behavioural science as tools for influencing real-world choices) as well as changing funders’ priorities (e.g. an increasing focus on the analysis of large-scale datasets) resonate well with our areas of research expertise. These developments have enabled us to engage, increasingly, in dialogue with research users. In recent years our academics have built links with a wide range of external stakeholders, including industry, charities, and government advisory groups, and it is these links, formed through, for example, CASE studentships and networking events, that have helped to pump prime the further development of impact activities while at the same time improving the quality as well as the relevance of our research.</p> <p>Business and industry: The impact arising from research of the Behavioural Science Group on models of judgement and decision-making illustrates our approach to interacting with non-academic users in the commercial sector and our increasing engagement beyond psychology. Initial research on context-based models of choice led to interest from retail companies, and the issues raised by research users in turn informed the focus of our research. The research expertise we thereby developed, partly through engagement with PhD students who had previously worked in the financial services industry and came to us because of our reputation for research on economic judgement and decision-making, ultimately led to the formation of a spin-out company. The company was founded with the support of Warwick Ventures (which commercialises</p>

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innovations arising from University of Warwick research).

Our approach has also been to focus on interdisciplinary research and engage increasingly with academics in Warwick Business School (where we have close links, including weekly discussion sessions), and Economics, enabling us to initiate and develop contact with research users who would not normally think of approaching psychology departments. The success of this approach is evidenced by our participation in the Network for Integrated Behavioural Science (NIBS; funded by an ESRC Large Grant of c. £4 million from 2013-2017) which brings together psychologists and behavioural economists from three Universities with the explicit aim of impacting public policy through engagement with research users both within and beyond our User Liaison Group (includes members drawn from the private, public and charitable/not-for-profit sectors).

Media: Our interaction with the media has become increasingly structured. Researchers regularly give interviews to the local and national press (TV, newspaper and radio), and are increasingly using social media and podcasts to make their findings accessible to a wider audience (with support from the University's Communications Office). For example, such coverage led to the Dorset Police contacting the Department about the potential of research in visual attention to impact driver education leading to a joint project partly funded by the ESRC.

Education: Our approach here has been to leverage an extensive network of contacts — both regional and national — with schools and educational professionals. The research of the Language & Learning Group is presented directly through annual teacher-practitioner workshops. For example, Dr Carroll is Chair of the 2014 Conference of the British Dyslexia Association, convenes the Midlands Reading Research Group, and recently co-authored a book aimed at specialist teachers. Her research findings are part of a government review and form the basis of reading interventions provided in North Yorkshire primary schools.

Government policy: Our research has informed policy decisions through direct engagement with the relevant audiences. For example, Professor Stewart has given four invited presentations (2008-2011) to the UK Cards Association (<http://www.theukcardsassociation.org.uk/>), and his input, invited by the Department of Business, Innovation, and Skills, fed into debate and decisions arising from a government White Paper ("*A Better Deal for Consumers*"; 2009).

Public services: Our approach, which involves for example the collaborative development of specific research programmes in response to media-generated public interest, is exemplified by the research of Dr Watson and colleagues who have been awarded ESRC funds to collaborate with the Dorset Police to investigate the long-term influence of interactive driving interventions.

Institutional and Departmental Support

Our approach has been facilitated through (a) the re-organisation of staff into the new impact-oriented research groups, (b) strong Departmental support for impact-related activities as illustrated above, and (c) a number of University initiatives (e.g. the HEFCE Higher Education Innovation Fund-supported Warwick Impact Fund) and structures. A key University-level initiative to encourage interdisciplinary activity is a series of Global Research Priorities (GRPs) each with access to substantial funding to promote interdisciplinary research and underpin new initiatives and impact; we have strong links with (and co-direct) the Individual Behaviour GRP, as well as contribute to the Energy and the Science and Technology for Health GRPs.

Several central roles within the University have supported the advancement of our impact, including Warwick Ventures and the Communications team (including the University's Knowledge Centre). We have taken advantage of wider dissemination opportunities available through the Warwick Research Archive Portal. We have also made use of opportunities for training in impact, media engagement and dissemination made available through the central Learning and Development Department.

c. Strategy and plans

The University of Warwick and the Psychology Department work collaboratively to create and support high impact research. The aim is to provide faculty with (a) the capacity to develop research with real world relevance, and (b) the tools needed to reach audiences beyond academia.

Our strategy has three key strands. First, we will build on our research expertise in depth in each of the three research areas we have chosen to develop within the Department. Each area has been provided with strong leadership and has been selected and developed with both research excellence and potential for impact clearly in mind. In all groups, team-based grant applications are expected to become the norm. Group-specific strategies for impact are as follows:

The **Lifespan Health & Wellbeing** group is well placed to benefit from current research

fundings' priorities. Noting that research with the highest impact comes from teams with complementary expertise (e.g., genetics, biomarkers, longitudinal data analysis) the group is making new appointments in strategically selected areas. This strategy, together with increasing involvement with the Medical School, will enable even greater focus on fundings' current priorities (especially those around large datasets) with team-based grant applications. The **Language & Learning** group has recently appointed a new head (Professor Kita) and will engage more directly with Warwick's Centre for Educational Development, Appraisal and Research (CEDAR) as well as developing existing contacts in the reading disability field. The **Behavioural Science** group will continue to position itself to engage in large collaborative grants aimed at issues of top priority in the behavioural sciences. Building on recent successes, our involvement in the Network for Integrated Behavioural Science, together with our increasing collaborations with the Behavioural Science Group in the Warwick Business School, will further enrich our network of contacts with key research users. Notably, in 2013 two current PhD students in Psychology have been working as Research Fellows with the Behavioural Insights Team at the Cabinet Office, where one of our 2012 graduates from the Behavioural and Economic Science MSc is employed.

Second, our new group structure has enabled us to become more outward facing and develop new contacts. We are capitalising on existing relationships, such as those developed through CASE studentships and the User Liaison Group associated with our ESRC Large Grant, to extend both the depth and breadth of our networks and collaborations. This latter process is already well underway.

Third, we will increasingly engage with University initiatives (such as the GRPs, Industry and Parliamentary Trust events in Westminster, and the "Warwick in Westminster" programme based on a network of over 600 alumni working across the political arena and providing policy-making engagement opportunities) as well as further developing Departmental structures such as our recently-established Impact Committee. This Committee's remit is to help members to develop and enhance the impact of their research. The Committee reports regularly to Departmental meetings and aims to showcase and promote impact development. The Impact Committee has implemented a three-strand approach to enhancing the focus on impact: (1) the initiation of a High Impact Panel of Department members who can provide feedback on enhancing the impact of projects at their initiation, especially in developing the 'vision' for impact in grant proposals; (2) collation of previous examples of impact for Department members, including successful grants and successful cases of impact, so that Department members are aware of good models for impact and the importance of impact for the Department, and (3) increasing awareness of impact and outreach opportunities.

We will continue to target high impact research via the GRP in Behavioural Science, a principle aim of which is to promote high impact research. We have already benefitted from small grant funding for research projects that make explicit their potential for impact. Such funding resulted for example in a strategic research partnership between psychology faculty (Professor Stewart and colleagues) and the Coventry Police. This complements the Behavioural Operations in Policing Group in which we are working with 13 police forces in England, including Greater Manchester Police and West Midlands Police.

d. Relationship to case studies

The case studies exemplify impact in relation to the key target areas for psychology described in the context section above.

Case study 1 (Chater) demonstrates how basic research on context effects have been applied to consumer behaviour and led to the establishment of a company (Decision Technology, which currently employs about 20 FTE staff and applies cognitive insights in a number of practical and commercial domains) facilitated through Warwick Ventures.

Case study 2 (Wolke) shows how our research on longitudinal outcomes of premature birth has led to impact through interactions with policy-making bodies and medical professionals, in relation to establishing resuscitation policies and guidelines for premature babies in several countries.

Case study 3 (Brown) demonstrates how we have applied basic cognitive science research to improve classroom-based teaching of numeracy and literacy. The research has led to a set of educational principles that have been used in c. 50 schools during the assessment period. The research has also led to the establishment of a research-based educational consultancy (KRM: PER) led by Dr Solity, an educational psychologist who collaborated on the applied research.