

<p>Institution: Heriot-Watt University</p>
<p>Unit of Assessment: 4 Psychology, Psychiatry and Neuroscience</p>
<p>a. Context</p> <p>Following a strategic decision by the University in 2003 to establish Psychology as a new discipline within Life Sciences, a sustained and ambitious programme of recruitment has reflected a commitment to applied research. As a result, most staff have a track record of achieving, or the potential to achieve, social or economic impact through their research.</p> <p>Contributions have been made to a wide range of beneficiaries, including: police forces in England and Wales; Government bodies responsible for developing public policy in the UK, Scotland, and Europe; the automotive industry; the food and entertainment sectors of the retail industry; Scottish and regional NHS bodies; charities, groups and networks providing support and advice. The types of impact achieved with these groups have been:</p> <ul style="list-style-type: none"> (i) Enhancements in public policy and practice, through improved techniques for the assessment and investigation of reports of crime, and through advice to Government bodies on legislation, regulatory frameworks, public information campaigns, and educational policy. (ii) Improvements in public and charitable services, through advice to child health practitioners and carers of dementia sufferers, through enhancements in advice and support to victims of crime and bereavement, and through workplace health and equality interventions. (iii) Improvements in safety and profitability of business operations, through the development of road transport safety standards and through the provision of marketing advice to the retail sector. <p>The Case Studies reflect core areas of our activity, and are the outcomes of work carried out by mid-career staff who brought mature programmes of research and user engagement to the Department, and were appointed early enough in its growth to achieve strong impact and to publish substantial underpinning research from Heriot-Watt between 2008 and 2013. The historical context means that many other staff in the Department are at earlier stages in publishing research from this institution, and in engaging with users in ways that will support strong Case Studies in the future (note that of the 14 full academic appointments made since 2003, nine have been to first lectureships, five of which were made since 2011).</p>
<p>b. Approach to impact</p> <p>As the group has grown rapidly over recent years, the approach has been to focus on establishing and embedding capacity both in research that creates impact, and in delivering that impact. The central elements of the strategy for achieving these goals have been:</p> <p><u>Recruitment.</u> In the course of recruitment, we looked closely at experience of user engagement as an indicator of actual and potential ability to create and deliver impact. During the period 2008-13, for example, the nine staff that we recruited had the following experience of user engagement:</p> <p>Buckingham: Collaboration with surgical training specialists in motor learning research. Cowan: Consultancy and CPD activity with the offshore extraction industry, the Scottish Government, NHS Scotland and regional NHS bodies. Dewar: Regular involvement in clinical work with patients in NHS memory clinic. Work with Alzheimer Scotland in advising politicians. Public engagement through TV, radio and print media. Gow: Advice based on ageing research to the NHS Scotland Public Health Science Directorate. Graffoner: Consultancy for NHS and local Government supported organisations promoting equality and well-being at work. Harper: Consultancy for charities supporting bereaved parents. Milders: Research collaboration with clinical neuropsychologists, dementia care staff. Morrison: consultancy with media and advertising agencies on promoting memory strategies; public engagement including TV, radio, newspapers and popular media. Rajendran: Advice to the Danish government education department, and to schools for special educational needs.</p>

Funding. Specific efforts have been made to establish funding streams from organisations that directly transfer knowledge and impact to beneficiaries. These have included policy making bodies such as the Health and Safety Executive, Scottish Government Chief Scientist Office, and NHS Scotland, and also charities such as Autism Speaks. All staff are expected not only to establish such funding streams but to engage with these types of organisations in order to establish strong collaborative links which facilitate the development of pathways to impact and direct delivery of impact from research.

External links. We have established strong links with psychologists in professional practice and applied research through their appointment as Honorary Professors. They are: Prof Stephen Bell, Consultant Clinical Neuropsychologist at NHS Grampian; Prof Andrew Parkes, Chief Scientist and Research Director at the UK Transport Research Laboratory; Prof Caroline Curtis, Head of Talent, Succession and Leadership Development at Santander UK; Prof David Towner, Head of Global Assessment at BP; Prof Ray Miller, an independent consultant in Health Psychology; Prof Jackie Bates-Gaston, Chief Psychologist with the Northern Ireland Prison Service. The strategic aims of these appointments were to create new opportunities for engagement with users, for collaboration in applied research, and for access to Government, commercial and third-sector funding sources. In 2012, the University established the Centre for Business and Coaching Psychology, appointing **Grajfoner** as its Director, as a means to support growth in research, knowledge exchange, consultancy and teaching in these areas, all of which will bring engagement with practitioners and with business and public sector employers. The Centre will host the 2013 European Conference in Coaching Psychology.

University support for impact development. The University's Research & Enterprise Services (RES) has invested over £6M since 2009, including £3M in support from the European Regional Development Fund, to produce a step change in industry engagement and commercialisation of research across the university. This programme, "Converge", gave a dedicated Business Development resource complemented by expert support in the delivery of marketing materials, events, and development programmes for academic staff and PGR students. Through working with the Business Development Executive assigned to the Department, **Harper** has won funding for a KE project on therapeutic art-based intervention with a creative social enterprise (Delta Studios, Falkirk). A component of the Converge programme is "Converge Challenge", a pan-Scotland business competition organised annually by HWU and open to all staff and students of all Scottish Universities and Research Institutes, which incorporates training and mentoring by some of Scotland's top entrepreneurs. This complements the national and university programmes around Proof of Concept and spinout creation, which focus on making technology market ready. One current member of the Department (**Green**) and one former member have participated in the competition.

University provision for training. "Research Futures" is the university's innovative researcher development programme, open to all academic staff and research students, and offering a wide range of training related to all facets of Knowledge Exchange (innovation, entrepreneurship, policy, public engagement). It is delivered by the University's award-winning Centre for Academic Leadership and Development (Times Higher Education awards for 'Outstanding Support for Early Career Researchers', 2010 and 'Leadership & Management' 2013; EU recognition for HR Excellence in Research, 2010, 2012). Early Career Researchers are encouraged to take part in the Heriot-Watt Crucible, Scottish Crucible, and European Crucible research leadership programmes, which develop core skills for transforming research into significant impact via collaboration, interdisciplinarity and innovation. So far, four Psychology staff have participated, and two have obtained funding through it; **Muldoon** for a project in collaboration with the Languages Department on early years maths teaching, and **Milders** for a collaboration with Computer Science on assistive technology in dementia care. PGR students and research associates receive specialist training via courses and Summer Schools in Entrepreneurship, and can enrol for KE-training events for Scottish PhD students and the "KE Scotland Conferences", all organised by the HWU Research Futures team.

c. Strategy and plans

Looking to the future, the Department will build on its successes in recruitment and its commitment to applied research by focusing its impact in six targeted areas:

- (1) Road safety**, building on **Lansdown's** 20-year experience in engagement with the automotive industry, the Transport Research Laboratory, and other agencies, and on opportunities for collaboration with transport engineers in the Heriot-Watt School of the Built Environment.
- (2) Careers in the workplace**, building on **Cowan's** 10-year experience in consultancy to the offshore extraction industry, Government and the NHS, and on **Grajfoner's** experience in coaching consultancy with business.
- (3) Bereavement**, where **Harper** (an early career researcher) is rapidly forging links with support organisations (she was keynote speaker for the 11th annual Scottish Forum for Bereaved Parents, 2013, and an invited participant in the inaugural meeting of the European Family Bereavement Network, Leuven, 2013).
- (4) Assistive technology for autism**, where **Rajendran** has received two invitations since 2012 to provide expert advice to the Danish government education department, and is supported by a productive collaboration with the Interaction Lab in the H-W Computer Science Department.
- (5) Dementia care**, building on **Milders'** and **Dewar's** networks of collaborators in the NHS, experience in clinical practice and dissemination of research to care staff, and collaboration with the Computer Science Department in developing assistive technology.
- (6) Design for an ageing population**, where **Gow** has regular invitations to participate in meetings of research users organised by Age UK/Scotland, and collaborates with the Heriot-Watt Institute for Building and Urban design in research on the built environment as a factor in cognitive aging.

We have plans in place to develop more refined and rigorous strategies to build impact in these areas. Recruitment of academic staff will continue to take account of potential for research impact, with a new emphasis on making appointments that bring fresh expertise in research and user engagement to existing research themes. We will also continue to make honorary appointments, ensuring that non-academic collaborators in research projects are brought into closer contact with the Department through this route, and that they interact with other academic and research staff. The Centre for Business and Coaching Psychology will have a leading role in this respect, and will be used a model for the establishment of other specialist groupings in areas of emerging impact. We will intensify our use of central University resources, and particularly Business Development specialists in RES, to promote commercialisation and consultancy activity.

In addition, we have introduced new management processes to enhance research impact. The remit of the Department Research Co-ordinator will be expanded to cover the promotion of impact. He or she will set up arrangements to pool disparate experiences in user engagement so that staff can mentor one another in specific approaches, will work closely with the Department's Professional Development Reviewers to set individual targets for user engagement activities, and will take an active role in framing the proposals for generating impact that are now integral to bids for external funding.

d. Relationship to case studies

The Case Studies demonstrate the success of the Department's strategies for recruitment and for building links with applied research groups and professional psychologists. Experience of user engagement will continue to be a criterion for appointments in the future, and collaboration with relevant organisations will continue to be encouraged and consolidated through Honorary appointments. The experience gained from the research described in the Case Studies will be disseminated to members of the Department through mentoring, workshops and Professional Development Review, concentrating in particular on the six areas described above in which promoting engagement with users is a priority. The key experiences are in: influencing public policy and education (both Case Studies); working with industrial and commercial organisations (Driver behaviour C.S.); working with charities and support organisations (Stalking C.S.); working with public sector bodies (Stalking C.S.). Each of these is particularly relevant to a subset of the six areas, and they will be used in a targeted way to support growth of user engagement in each area.