

<p>Institution: Lancaster University</p> <p>Unit of Assessment: 4 - Psychology, Psychiatry and Neuroscience</p> <p>a. Context</p> <p>Psychology at Lancaster features the translation of high quality research into impact as a fundamental pillar of our research activities. We have established pathways to facilitate impact, ensuring interactions between user groups and researchers occur from early stages of research project planning through to project delivery. This is reflected by engagement with a diverse array of users who have benefitted from work conducted within Psychology's two research Centres: <i>Centre for Research in Human Development and Learning</i> (CRHDL) and <i>Centre for Cognitive and Social Research</i> (CCSR), as well as through our core involvement with University interdisciplinary research centres: <i>Security Lancaster</i>, and <i>Centre for Ageing Research</i> (CAR).</p> <p>CRHDL (comprising Developmental Neuroscience, Social and Perceptual Development, and Language and Literacy research groups), along with CAR, works closely with government advisors, educational, and health professionals to inform public policy and improve health and education provision. CCSR (comprising Perception and Embodied Cognition, and Social Processes research groups), in collaboration with the <i>Security Lancaster</i> research centre, directly impacts upon solutions for increasing effective policing and security, and improving industry practice. Our research has had measurable impact in the following areas (see b for more details):</p> <p><i>Improved public policy, services and practices</i></p> <p><u>Promotion of social inclusion.</u> CCSR:Social Processes has engaged with English national identity and citizenship issues (Institute for Public Policy Research, April 2009); the Equality Bill (Equality and Human Rights Commission, Westminster, June 2009); the use of language in public information broadcasting (Central Office of Information); the Government's strategy for branding the UK in publicity on the Olympics (Foreign and Commonwealth Office); and measurement of national identity in order to better predict policy-related attitudes (through NatGen collaboration).</p> <p><u>Improved policing and counter-terrorism.</u> CCSR:Social Processes has had direct impact in policing and counter-terrorism intelligence (e.g., Case Study "Research contributions to Government policy"). In border security, research on reasoning, decision making and interviewing techniques has been applied in UK and USA airports. This research informed a US Presidential working group, and resulted in authorship of 4 policy reports including a Government White Paper on airport screening and a Home Office report on night-time economy policing.</p> <p><i>Improved education, health and well-being</i></p> <p><u>Education.</u> Research on reading by CRHDL:Language and Literacy has contributed to Government reports on educational provision for children with developmental disorders (e.g., cited in the Rose Review (DfES, 2006)), following the House of Commons Education and Skills Select Committee report.</p> <p><u>Health and well-being.</u> We conducted research on development of cognitive processing and health into culturally-appropriate tools for professional practice in developing countries. Parenting research by CRHDL:Social and Perceptual Development has contributed to Sure Start programme policy and child care charity policy making (see Case Study "Promoting fathering"). Research by CRHDL:Language and Literacy and Social and Perceptual Development on developmental disorders has been conducted in conjunction with health charities (PhDs funded by Epilepsy UK, Down Syndrome Education International), and NHS NorthWest Services.</p> <p><i>Wealth creation and improved industry practice</i></p> <p>CCSR:Social Processes collaboration with AXA insurance has contributed to a £69M per annum saving due to improved interview practice. Our American Airlines funded research (£290K) has improved airline security and contributed substantially to industry revenue (see Case Study "Controlled cognitive engagement"). CCSR:Perception and Embodied Cognition and CRHDL:Developmental Neuroscience have contributed to product development with industry partners (Costain, Glaxo-SmithKline, Unilever), e.g., Glaxo-SmithKline funded a CASE BBSRC studentship (2011-2014) on cognitive neuropharmacology of glucose levels in energy drinks.</p> <p><i>Public engagement with science</i></p> <p>Our research has enhanced public understanding of science via media and science</p>

Impact template (REF3a)

communication events (see b).

b. Approach to impact

Our focus within Psychology has been to integrate research and impact activities in a manner that merges the goals of academics and users of their outputs. We engage potential beneficiaries early in project development, maintaining those links through to research output and implementation.

Consultation and Open Events. Our approach is focused on influencing policy by involvement in national debates and information gathering from these events to drive research policy. We monitor calls for participants and respond to invitations to national debates and government advisory panels. Impact on government approaches to security was initiated through staff secondment to Ministry of Defence (Taylor 12 months), and developed through unique IPR (Patents/trademarks), 6 PhDs funded through contract income from various Government departments (2010-2013), and a 5 year University-funded research fellow (commencing 2012). In response to recognised gaps in the training needs of police, intelligence, and education professionals, we ran a masters course in investigative expertise, and HEIF-funded short courses in investigative expertise and in developmental disorders, for 140 service users. We also ran an ESRC-funded seminar series to 829 NHS and LEA policy makers and practitioners. We have a 50% FTE administrator in Psychology employed to support HEIF events, and return on HEIF funding has been >£6 for every £1 invested, exceeding the national average return. At grassroots level, developmental research in CRHDL has increased research engagement in the local community with parents and practitioners through publicity distribution at clinics, maternity wards, playgroups, and coffee mornings for parents/child care professionals informing them of our work.

Advisory Panels. Within CRHDL and CCSR, we have established advisory panels, comprising experts from industry, educational practice, NHS provision, charities, and government. Our advisors meet with us annually for dissemination, and work actively with us to implement impact from our research in their individual areas of expertise. Security Lancaster and CAR also have formally established conduits for connecting with users of research through annual user events. These panels provide a mechanism by which impacts of Psychology's research can be communicated back to the researchers. It is also a means of ensuring that we remain flexible in terms of devising programmes of research that meet the needs of users. As an example, collaboration with health-based advisors has resulted in rolling out of a language test in combination with nutrition supplements for 2200 Malawian and 1200 Ghanaian children (via <http://www.ilins.org>) to promote cognitive development.

Facilitation of industry collaborations. The research centre Security Lancaster, co-directed by members of Psychology, is dedicated to connecting research to impact through graduate training and staff placements. Security Lancaster hosts a GCHQ/EPSC Academic Centre of Excellence in Cyber Security Research, training PhD students in psychological and forensic linguistic techniques. A full-time Partnerships Manager in Psychology develops links with beneficiaries in industry and public bodies. Placements have proven to be an excellent means for transmitting research to potential users. Students in industry settings (via the MSc in Psychology of Advertising) and two staff are currently committed to secondment to industry placements. Since 2010, collaborative research, contracting, consultancy and continuing professional development income totals £2.2M.

Public engagement with science. Our scientific research has been communicated through public engagement events (Monaghan has directed psychology events at the British Science Festival from 2008-2012), consequently CRHDL:Language and Literacy research has been presented at annual Festival events (attendance >480). A media fellowship placement (Alcock, BBC, 2010) has opened our research to new media approaches (e.g., twitter, facebook feeds). We regularly disseminate press releases via the University Press Office: CRHDL:Language and Literacy research on language processing was widely covered (2008: Irish Times; 2009: BBC Radio 4, BBC Radio Scotland; 2011: Science magazine; 2012: BBC Radio Cumbria, BBC Radio Lancashire, Daily Express (combined audience 1.2m), Huffington Post (audience 36.2m)). CRHDL:Social and Perceptual Development research in parenting and development featured on a BBC Horizon programme (2008; audience 0.8m), and 21 press outlets (including Economist, Guardian, New Scientist, The Australian; combined circulation >2m). CCSR:Perception and Embodied Cognition research on Alzheimer's disease (2012: Daily Mail, ITV News; combined audience: 2.4m). Our school outreach programme, supported by RCUK funding, has presented psychology as a science career to 70 secondary schools nationally.

Impact template (REF3a)

Recognition and promotion of impact within Psychology. New appointments in Psychology attend University training courses on developing pathways to impact. Contributions to impact for all academic staff are assessed annually as part of professional development appraisals, and effective and measurable impact is considered as a criterion for promotion at the University level. Impact activity is recognised in the workload of staff, thereby encouraging engagement with research users in measurable ways. Ring-fenced funding is available for impact acceleration projects and public science engagement events.

c. Strategy and plans

Our current approach to impact generation has proven to be highly fruitful in terms of the volume and quality of impact activities generated by Psychology during this period. Our strategy for the future is to entrench current practice to sustain impact (as shown in **b**, above) and maximise transfer through Departmental policies for impact activities. Specifically, our strategic plan involves: Staff awareness and recognition of impact. We include research impact development into annual staff appraisal and through the University's recognition of impact in promotions criteria. New staff attend a university event on impact orientation. We also understand that impact creation is not fully predictable. Our approach is thus to ensure that flexibility in resourcing staff for impact activities is available within our managerial system.

Knowledge partnerships. Lancaster University is developing an "Innovation Campus" initiative, expressly for the purpose of supporting the generation of and interaction with SMEs. Placements have proven excellent means by which research can be transferred to potential users. Flexible arrangements are included in staff contracts to facilitate placements, and we will ensure continuity in connecting placements with industry, e.g., following up the two current staff with arranged placements with additional formal arrangements with industry and government. We will continue training and connection with industry, health, and education practitioners through HEIF provision, consistent with the Witty Review recommendations (2013). Through enhanced partnerships we aim to increase our industry/3rd sector partner income above its current level of £733K/annum.

Improving facilities for implementing impact. We will improve facilities to permit greater interaction of research that is directly relevant to beneficiaries. For instance, interactions with Glaxo-SmithKline require dedicated pharmacological lab space. Expansion of our facilities will enable expansion of collaborations. Collaborative work in CCSR with police and military partners requires dedicated interview suites and secure arrangements for data management which go beyond those required by standard data protection and experimental ethics procedures. Expansion of these facilities is another of our strategic priorities as it will enable both pure research and research with determined impact.

Public engagement. Department and University funding is provided for public engagement activities. We will ensure that current levels of public engagement are increased, together with measureable impacts of the research. E.g., we will follow-up the RCUK funded school project visits with assessments of science education outcomes for schools. We will also integrate industry with postgraduate training, as is currently the case in an EU Initial Training network, centred in Psychology, that coordinates research and industry interests. We will also continue the follow-up projects derived from our HEIF activities, which have resulted in joint research with charities (e.g., PhD studentship from Waterloo foundation) and government (e.g., 5 PhD DSTL studentships).

d. Relationship to case studies

Improved public policy, services and practices. Case Study "Research contributions to Government policy" demonstrates how we have translated and implemented forensic and investigative research to shape UK police practice and influence Home Office policy, through our strategy of understanding needs and communicating research through secondment of staff and CPD delivery. These developments have also influenced policy internationally, including in the USA.

Improved industry practice. Case Study "Controlled cognitive engagement" details how core cognitive research in reasoning and interviewing converts into impact in improving security in industry. This case study illustrates how our strategy for long-term interactions with industrial partners and industrial research funding resulted in large-scale benefits for industry, both economically and in terms of safety improvement.

Improved well-being and social care. Case Study "Promoting fathering" describes research on the role of fathers, and demonstrates how social psychological research influenced national policy on education and health services for child development. This case highlights how co-funding with charities resulted in policy change for Government in early years intervention and care.