

Institution: Durham University

Unit of Assessment: Psychology, Psychiatry and Neuroscience

a. Context

Durham Psychology's approach to impact during the period of REF has been to reduce the obstacles and build bridges between research carried out within Durham Psychology and the interests of non-academic organisations such as the NHS or industry. Our activities have therefore focused on building relationships between Durham Psychology and key stakeholders – promoting both a better understanding of basic research within these organisations and, in turn, a better understanding within Durham Psychology of end-user needs and key questions that need to be addressed. As shown in our case studies, our major impacts over the REF period have been societal. These include clinical rehabilitation, influencing policy on health and safety regulations and providing a basis for support and interventions for parents and families experiencing difficulties. Supporting closer relationships between end-users and Durham Psychology has driven this impact, but we also continue to broaden our impact focus. This is done both through the development and building of research strength in reconfigured research groupings (such as the Applied, Clinical and Health group) with a clearer alignment to end-users needs, and by conducting basic science while extending its benefits to practical applications. An excellent example is the design of powerful new methodologies to reduce animal numbers in common tests of memory as a key component of work in the Neuroscience of Learning and Memory Group which serves as an adjunct to work on brain mechanisms of episodic memory.

b. Approach to impact

To achieve our aim of conducting high quality basic science of relevance to stakeholders we have adopted a range of approaches supporting this mutual relationship between Durham Psychology and non-academic organisations where our research can be of benefit.

Greater collaboration with end users

Over the REF period, Durham Psychology has worked closely with a number of end-users to increase mutual understanding of each other's priorities and build collaborations. For example, we have built a strong partnership with local NHS Trusts through investment in shared facilities (e.g. £1.5M University investment in a jointly managed MRI Centre with time allocated equally for research and clinical use) and close alignment of research interests with clinical opportunity (e.g. Reissland's work on post-natal depression and mother-child interactions). These close collaborations also allow a more agile response to addressing key questions when they arise. For example, the development of the imaging centre and closer relationships between the neurologists and Durham Psychology has identified a key question (how to locate language centres in the brain in patients requiring surgery) and key Durham Psychology staff (Weis, who has expertise both in imaging and identification of language centres). This collaboration readily came to light as a direct consequence of regular meetings between clinicians in the local NHS Trusts and Durham Psychology including those organised under the umbrella of the University's Wolfson Research Institute where many clinicians are appointed as Fellows alongside academic staff. As a result of this close link, the identification of a clinical conundrum was rapidly followed by provision of funding, on a 50/50 basis between the NHS Trust and the University, to support a research studentship to undertake this study.

Wider communication of basic research

It is clear in many cases that basic science has direct relevance to end-users but that practitioners are unfamiliar with the gamut of research work and researchers are unclear where the interest in, or application of, their work lies. To that end, Durham Psychology has been keenly supporting wider communication of basic research. Durham University's Research Institutes are fundamental in providing such a route to a wider audience. For example, the Wolfson Research Institute (WRI) involves number of academics, clinicians and other stake-holders through Fellowships of the Institute as well as organising regular meetings and quarterly networking events. These provide excellent opportunities for two-way research discussions and have created a range of impact-related opportunities within Durham Psychology. For example, recent work has linked research

Impact template (REF3a)

within Durham Psychology (Ellison) with other researchers within the WRI and clinical fellows of the WRI to focus on the efficacy, safety and mechanisms of spinal cord stimulation in treating chronic back pain.

Such research links have been extended to collaboration with local police authorities where pressing practical requirements are closely allied with research interests in the Department (e.g. Centifanti's work on callous and unemotional traits). These discussions have already led to advanced planning of collaborative projects which are currently seeking funding opportunities. Other University institutes such as the Institute of Advanced Studies (IAS) provides even broader ranging scope for discussion – bringing together academics, non-academics and visiting fellows across a range of disciplines around a broad central theme. For example, the IAS has already led to a key research theme in Durham Psychology (FERNYHOUGH, Hearing the Voice) which has been supported by >£1M from the Wellcome Trust for interdisciplinary work on auditory hallucinations, which is beginning to have a beneficial impact for clinical populations affected by hearing voices through the development of clinical tools to assist diagnosis and mobile applications for the public to improve understanding of the condition.

Better identification of research opportunities delivering impact

There is a counterpart to the communication of basic research to promote its application, namely the development of a means by which practitioners can communicate the nature of key problems that they face for which they seek a solution. To this end, Durham University has forged strong collaborative links with a variety of industrial partners to ensure that they can be directed towards appropriate academics able to respond to their research questions. For example, over the REF period Durham University has fostered a significant partnership with Proctor & Gamble which now includes over 100 academics across the University. Durham Psychology has embedded itself fully in this partnership which includes regular large scale meetings between P&G teams and Durham academics. From these meetings Durham Psychology has brought together researchers interested in visual properties of materials with teams in P&G interested in customer perception of material cleanliness. This work has resulted in a co-funded studentship between Durham Psychology and P&G. Building on this relationship, Durham Psychology has developed its own P&G interest group where 8 members of staff (Heywood, Kentridge, Easton, Rosenthal, Smith, Burt, Boothroyd, Atkinson) have come together in regular meetings with P&G teams and look for further opportunities. Projects are currently developing as a direct result of these meetings where links with additional P&G teams (such as face and beauty team) are in the process of identifying projects of common interest.

Much of this engagement with new research opportunities is facilitated by Durham University's new Business and Innovation Services (DBIS) which has been established during the REF period. This support centre within the University establishes and maintains a series of commercial and public-sector links across the institution. DBIS works closely with the Director of Research in Psychology to ensure that opportunities that arise through these links are identified where relevant. DBIS also works closely with the department to ensure that where research opportunities are identified, they can be developed to find a relevant external partner.

Investment in impact-related work

In order to ensure that basic research achieves its potential impact, Durham Psychology acknowledges that significant investment in time, staff and financial resources is required. Our process of annual staff review includes a personal research plan in which impact-related activities are explicitly identified. As a consequence, the department's research committee is able to make plans to prioritise impact-related work where appropriate and plan to invest funds as required. For example, for the case study on mind-mindedness it was identified that there was a need to spend staff time on engaging with policy advisors and government in order to ensure maximal impact of the work on helping parents and families experiencing difficulties. The member of staff leading the work at that time (Meins) was therefore able to secure a reduced teaching-load to ensure sufficient time was available to pursue a range of impact-related activities. Similarly, when impact requires significant financial support Durham University has established an impact seedcorn fund to provide up to £20k to support impact-related activities. This support is essential in helping staff provide the resources to ensure impact. For example, Fernyhough's Hearing the Voice project (see above) has secured funding through this scheme to provide the clinical tools for clinicians to make use of the

results of basic research and to develop mobile applications for the public to understand better the implications of this research.

c. Strategy and plans

In order to build on the existing support for impact, Durham Psychology has developed a strategy to maximise the impact potential of current research

- 1) Continue to engage fully with DBIS to identify new impact opportunities. DBIS continues to expand along with its portfolio of external organisations and Durham Psychology will continue its excellent relationship with them to ensure new opportunities are identified as they arise
- 2) Promote closer relationships with external partners. Our model for working with P&G through a wide ranging interest group will be expanded to other key partners (such as the NHS) to deliver a range of collaborations
- 3) Provide further support for impact-related work. The development of a new opportunity within the science faculty to match externally generated funds for studentships is already seeing greater engagement with work likely to produce impact (e.g. NHS, NC3Rs/GSK)
- 4) Continued engagement with a wide audience. Engagement through the University's Research Institutes has resulted in successful projects likely to have significant impact. Durham Psychology will continue to identify new avenues for promotion of its work to a non-academic audience through a variety of novel routes (e.g. mobile app development).

d. Relationship to case studies

Durham Psychology's approach to impact has both influenced and been influenced by the work identified as case studies for this REF period.

The priority of developing closer collaboration with end users has been directly influenced by the success of the work leading to the case study 'Visual Field Deficits and their Rehabilitation'. This work has developed over a number of years through the engagement of clinicians both locally and further afield. In particular, the field trials supported by NIHR established close links with the local NHS Trusts which have continued beyond the lifetime of the NIHR project, and been rolled out elsewhere. This partnership established the good relationship between Durham Psychology and the Trust which allowed the investment in a shared MRI centre and its successful co-management. This centre has in turn facilitated greater collaborations such as pain management and improved neurosurgical intervention. The cyclical nature of this relationship (i.e. collaboration fostering further collaboration and mutual investment) has been a backbone to the Department's research growth over the REF period. We have used it as a model for other successful impact-related work such as that between Easton and Eacott and NC3Rs. The initial work on reducing animal numbers in common tests of memory (through an NC3Rs funded studentship) has developed through engagement in NC3Rs' industrial liaison scheme (Crack-IT) which, in turn, has led to a collaboration with GSK Shanghai to further modify these tasks. The latter is now being supported with further investment by NC3Rs and the University.

In contrast to industry led initiatives, wider communication of basic research has directly influenced the case study on 'Mind-mindedness: impact on parenting advice and professional practice'. As a direct result of wider communication of the basic research on mind-mindedness to practitioners as well as through wider public engagement through social media such as Twitter, the relevance of this work was identified by NSPCC through their 'All Babies Count' programme.

Similarly, the case study on 'Visual Field Deficits and their Rehabilitation' has been influenced by Durham Psychology's investment in impact-related work. For example, the costs of materials provided to clinicians to increase awareness and uptake of the programme of visual rehabilitation were covered by the department in order to ensure that impact was not limited merely through lack of investment. Our experience has proved this to be a very effective means of widely advertising the availability of benefits flowing from research which has in turn led to an increase the impact delivered by the project.