

Institution: University of Sussex

Unit of Assessment: UoA 4 Psychology

1. Context

Psychology, Psychiatry and Neuroscience at Sussex combine cutting-edge, discovery-oriented research and strong engagement with policy-makers in health and social care, non-governmental organisations and the private sector. As a result, our research has had significant impact in relation to contemporary challenges in mental and physical health, social exclusion and well-being.

Our submission brings together five research groups, four in the School of Psychology – *Behavioural and Clinical Neuroscience, Cognitive Psychology, Developmental and Clinical Psychology, Social and Applied Psychology* – and one in the Brighton and Sussex Medical School (BSMS) – *Clinical Brain Science*. The submission also encompasses seven Research Centres (see REF5 Environment), including the *Sackler Centre for Consciousness Studies* (Sackler Centre), and *Sussex Health Outcomes Research and Education in Cancer Centre* (SHORE-C), both of which have had particular success in generating applied research outcomes.

2. Approach to impact

The key strategic goal for generating research impact at Sussex is ‘In partnership with others, contribute to socio-economic well-being, in the region, nationally and internationally, as a result of exchanging ideas, knowledge and technology’ (University Strategic Plan 2009–2015, *Making the Future*). In Psychology, Psychiatry and Neuroscience the implementation of this university strategy has comprised four broad components: (i) building external collaborations, (ii) emphasising outreach and knowledge exchange activity, (iii) promoting effective communication with non-academic audiences, and (iv) providing School and personal incentives for more-applied work.

Building External Collaborations

Through a policy of encouraging consultancies and research and teaching links with external organisations, groups within this UoA have developed collaborations in three key areas: health and welfare, commerce, and public policy and services.

Health and welfare

We have strengthened our interactions with the NHS, facilitated by a formal research collaboration agreement with Sussex Partnership NHS Foundation Trust (SPT). Three professorial members of staff within the UoA (S. Banerjee, Critchley, Fowler) have posts jointly funded by SPT and the University. There are additional links with a wide variety of other Health Trusts and Local Authorities (LAs).

- Critchley, Harrison, Cartwright-Hatton, Davey and Field have developed and implemented novel interventions to reduce long-term disability in the area of mental health, in collaboration with colleagues in the SPT.
- Fallowfield and Jenkins have developed communication training packages for doctors and other health professionals concerned with the treatment of cancer patients, and have devised protocols to enhance the recruitment of cancer patients to randomised control trials. This work has involved extensive collaboration with hospital oncology departments and pharmaceutical companies.
- R. Banerjee has worked with Local Authorities (e.g. Brighton, Bridgend, Derby) and government departments (e.g. Department for Education, with responsibility for Education and Children’s Services) to develop policy and improve practice regarding youth mental health, bullying, and social exclusion.

Commerce

Although links with drug and food companies predominate, we are also developing new projects concerning colour perception and its relevance to paint manufacture (Azko Nobel), and with

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commercial providers of e-CBT (Ultrasis).

- Clifton's and Yeomans' research on the neural and behavioural mechanisms underlying eating has contributed to the development of drugs that enhance satiety and hence play a role in controlling obesity (e.g. Lorcaserin) and food products and associated technology that will support people in weight-reduction programmes (collaborations with Ajinomoto, Unilever, Danone). The commercialisation of apparatus (*Sussex Ingestion Pattern Monitor*) used in human feeding studies was supported by the University's Enterprise Development Fund, and emerged out of several consultancies with food companies.

Public policy and services

- As a result of Oakhill's work on reading in children, she was consulted on government reforms to the National Curriculum (English), especially on approaches to literacy and reading. Her research has also been influential in the development of a widely used training package for teachers. A similar consultation on numeracy is taking place and Field has been commissioned by the HEA STEM project to write a report on the teaching of mathematics and statistics in Higher Education.
- Drury has conducted research that has informed Government (Cabinet Office, Health Protection Agency) and Police (Greater Manchester Police Authority) policies on crowd management and collective responses to emergencies.
- Brown's research on acculturation has led to a project to evaluate the Gateway Protection Programme for the resettlement of refugees, in collaboration with the Home Office and NGOs (Refugee Council, Refugee Action).

Emphasising Outreach and Knowledge Exchange Activity

In order to engage with specific non-academic audiences, we mount regular 'showcase' events. Work on alcohol and substance abuse and addiction was showcased to invited guests from the Alcohol Education Trust, Departments of Health and of Education, the Police, clinicians from SPT and representatives of several pharmaceutical companies (May 2013). Outcomes have included strengthened collaboration with the substance-misuse services through clinical research centred on ecological/momentary assessment and intervention, and the development of services for users of new psychoactive substances. Dittmar and R. Banerjee organised an open symposium on consumer culture as an end-of-grant dissemination activity, attended by policy-makers and practitioners (April 2013), that resulted in Dittmar participating in the UK government's first international body-image conference.

We have also regularly presented work at events concerned with the public understanding of science, such as the Brighton Science Festival, 2008–2013 (Dienes, Field, Horst, Reby, Ward and Yuill), the Cheltenham Festival of Science, 2013 (Ward), the Consciousness EXPO, 2012 (Ward, Dienes), Manchester Art Gallery, 2013 (Franklin) and the Royal Institution of Great Britain, 2013 (Brown).

Oakhill organised an ESRC-funded seminar series in 2008 for teachers and educational psychologists on educationally relevant reading research. This was followed by a dissemination session (in September 2013) on her *Adaptive Learning System*, again for teachers and educational professionals.

R. Banerjee's work, funded by the Gulbenkian Foundation, with school-excluded students resulted in a play ('The Girls') that had short runs in both London and Brighton, and was followed up with a workshop for teachers, social workers and education policy-makers (March 2013).

There are also monthly research seminars held by members of the Developmental and Clinical group, open to clinicians, the public, service-users and carers (Mood and Anxiety Research; Sussex Psychosis Research Interest Group). These promote the development of joint research projects in the mental health arena.

Promoting effective communication with non-specialist audiences

We produce bespoke educational, policy and briefing materials that disseminate our research to a wider, but specifically identified, audience (e.g. research briefing leaflets to toy manufacturers,

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childcare groups, etc.). This promotional work is supported by an annual allocation of £25k from the Higher Education Innovation Fund, which finances two part-time support staff and also funds the promotional events and briefing materials.

Research is also publicised through the School of Psychology and BSMS web-pages in the form of regularly updated 'Showcase' pages where research is presented in an attractive and accessible fashion using short video clips, a regular 'blog' where new research findings are aired to the general public, and a Twitter account that posts information about School events and successes. The University Press Office is proactive in engaging with local and national media, ensuring that our research and its application are presented to the widest audience.

Providing School and personal incentives for applied research

Increasing emphasis has been placed on encouraging staff to engage in Knowledge Transfer Partnerships (e.g. Yeoman's work on satiety-inducing foods with Leatherhead Food Research), and to negotiate both conventional CASE and other forms of PhD studentships with external partners (nine won since 2008 with, *inter alia*, Eli Lilly, Johnson & Johnson, Leatherhead Food Research, Sussex Partnership Trust (SPT), Gulbenkian Foundation, and Centre for Team Excellence). Working with external organisations is encouraged by our consultancy policy. Consultancies are incentivised by devolving significant percentages (typically 85 per cent) of the income won by individuals into their personal research accounts. Examples of recent consultancies include R. Banerjee's and Brown's work with the Development Education Centre (South Yorkshire), Crombag's with RenaSci, Drury's with the Health Protection Agency, Fallowfield's and Jenkins' many contracts with the pharmaceutical industry and cancer charities, and Stephens' drug-discovery work with Merz and GlaxoSmithKline. School and University Research Funds exist to support 'seed-corn' projects that may eventually result in commercial, health, public policy or other impact [see REF5 – Environment Statement].

3. Strategy and plans

As described in REF5, our overarching aim is to ensure the continued vitality and sustainability of research in Psychology, Psychiatry and Neuroscience at Sussex through the establishment or maintenance of world-leading centres of excellence in Addiction, Consciousness, Dementia, Developmental Psychopathology, Social Inclusion and Health Behaviour Change. Successful translational research is better achieved by building vibrant research groupings rather than by relying on the efforts of individuals. To this end, we plan an expansion of our successful strategy of creating research centres, best exemplified by *Sussex Neuroscience*, which comprises several activity hubs, some including an explicitly applied focus (e.g. addictions, eating behaviours) and others generating impact as a by-product of a 'blue skies' research agenda (e.g. the Sackler Centre's project on providing innovative clinical tests to assess presumed vegetative states). The *Rudd Centre*, whose focus is on social and developmental aspects of fostering and adoption, and the *Sussex Addiction Research and Intervention Centre*, which will pursue translational research on drug addiction in collaboration with SPT, are two newly established centres. Other likely candidates for new ventures will be a *Centre for the Treatment of Child Anxiety Disorders* and a *Centre for Dementia Studies* (both with the SPT). Finally, we also envisage a *Centre for Intervention in Psychosis and Severe Mental Illness*, facilitated by the recent arrival of Fowler.

These centres will each develop their own impact strategies whose implementation will involve the following three activities:

- the identification of key strategic partners and the building of links with them;
- capacity building via new staff appointments; and
- investment in specialist support and governance.

Key strategic partners

Successful partnerships have been a hallmark of our impact strategy in recent years, primarily with the SPT and various LEAs. We plan now to extend the range of these partnerships, capitalising on emerging research strengths in the UoA. One promising avenue that we will explore is collaboration with the police – and the criminal justice system more generally – at both a local and

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a national level. This will build on current research on hate crime (Brown), crowd management and responses to emergencies (Drury), young offenders (R. Banerjee), road-user behaviour and face recognition (Hole) and the statistical analysis of police data (Bond, Field).

Capacity building

Extending the reach and significance of future research impact will require investment in new staff with a wider range of backgrounds and skills than has hitherto been the norm in our academic appointments. Over the next five years, we envisage the appointment of faculty with proven track records in the successful application of their research and their ability to bridge academia and external organisations. Such recruitment will run in parallel with more conventional appointments (based on potential for ground-breaking basic science), resulting in a professionally more diverse group of staff by 2019. We also expect to achieve synergies through the introduction of an undergraduate, year-long work-placement scheme which will involve faculty contact with a wide range of public and private bodies. We shall also use these visits to build applied research collaborations. We also anticipate further expansion of our existing successful collaborative PhD studentships. Finally, we plan to take advantage of secondment and internship schemes offered by Research Councils to enhance collaborative research activities and awareness of issues and challenges in contributing to policy development, such as the ESRC International Partnership and Networking scheme; MRC, BBSRC and ESRC research internships (for PhDs); the BBSRC Industry Fellowships scheme; MRC Fellowship – Partnership Award. Winning such awards – and we already have two recent ESRC research internships – will ultimately lead to more successful networking for the building of future end-user partnerships.

Specialist support and governance

Ensuring that these activities achieve maximum impact will require the appointment of new support staff (and the training of existing staff) with skills in a range of dissemination activities (e.g. press releases, blogs, public events, web-site design), as well as relationship development and management. The latter will be achieved through a broadening of the role of the Director of Research and Knowledge Exchange, working closely with research group leaders. It is envisaged that these developments will be resourced from increases in research income over the next 5 years.

In addition, we will encourage the establishment of Steering Groups within all research projects with a strong policy focus. Such Steering Groups will have representation of user groups and other key stake-holders and will help to ensure that research is developed to meet the needs of users.

4. Relationship to case studies

Five case studies are submitted which represent the range of impacts of our research beyond the academic domain and demonstrate the way in which the enhancement of impact has been supported by components of our Approach to Impact outlined above.

- Drury's policy-relevant work on collective responses to emergencies was facilitated by a grant from the School of Psychology's Research Fund (*Incentives* and *Outreach Activity*). It has also been supported by a jointly-funded doctoral studentship with the Health Protection Agency (*Building Collaborative Links*).
- Clifton's work on fenfluramine and the identification of serotonin 2C agonists as potential treatments for obesity was supported by two BBSRC LINK awards between Sussex and Vernalis – a pharmaceutical company (*Incentives*).
- Oakhill's work on inference learning by young children was supported by a series of ESRC project grants. The high profile of this work led directly to the invitation to act as an advisor on revisions to the National Curriculum (*Outreach Activity*).
- SHORE-C's patient-centred work on communication skills in oncology grew out of a sustained period of engagement with cancer specialists in hospitals (*Outreach Activity*).
- SHORE-C's work on recruitment into RCTs in oncology was informed by the Unit's close links with clinicians and trial designers in this area (*Outreach Activity*).