

Institution: University of Southampton
Unit of Assessment: 4 Psychology, Psychiatry and Neuroscience
<p>a. Overview</p> <p>The UoA is Psychology which has three Divisions, (1) Clinical Neuroscience, (2) Cognition, and (3) Human Wellbeing, and 6 labs/centres described below. Key features of the UoA include:</p> <ul style="list-style-type: none"> • A large and growing body of researchers, who work within productive & supportive teams (33.2 FTE staff submitted, ~50 RFs & RAs, and 177 PGR students enrolled since 2008). • Internationally recognised research leaders within each Division. • High research productivity, with over 1500 publications since 2008. • Very substantial growth in grant income (e.g. £2.3M in 2012-3, and £1.7M in 2011-2, versus £0.9M p.a. over the RAE2008 period; and awards to Psychology PIs increased to a mean of £2.9M p.a. in the last 3 years, versus £1M p.a. in 2008-9 & 2009-10). • Extensive research collaborative networks with leading institutions in the UK (e.g. Cambridge, Oxford, Institute of Psychiatry, IoP) and worldwide, e.g. Ghent, U California San Diego (UCSD), National Institute of Mental Health (NIMH), and many others. • Substantial and wide-ranging contribution to the discipline in terms of membership of key international research committees, and editorial work. • A distinctive and core focus on theoretically grounded and empirically rigorous translational research applied to real-world issues, e.g. mental and physical health and well-being; military and airport security (See Impact Template and Case Studies). • A lively and challenging research culture promoting creativity and supporting excellence. Divisions have weekly research meetings in term, where staff and PGRs present and discuss their research, key papers, methods and plans. In each Division, labs & centres are additional settings for intellectual activity, peer support and bases for investment and recruitment. These are led by senior academics, responsible for developing junior academics and PGRs, Health & Safety and resources. There are also Psychology-wide weekly seminars by internationally-renowned visiting speakers & colleagues. Psychology has strong interdisciplinary links (including joint posts) across the University (e.g. Medicine, Biological, Health, and Social Sciences, Engineering).
<p>b. Research strategy</p> <p>A core strategy is to recruit, retain and develop highly research-productive staff and to facilitate their opportunities to conduct high quality research by providing them with state-of-the-art equipment, facilities and research time. Since 2008, the University has invested in 3 new Chairs in Psychology and we have expanded the size of our research groupings, incorporating RFs, RAs and PGRs to encourage a 'critical mass' of productive researchers.</p> <p>Each Division is represented on the Psychology Research & Enterprise Group (chaired by the Deputy Head of Psychology: Research) which is responsible for overall policy and strategic planning. The Divisions, and their membership by Category A staff and University-funded RFs are described below (professorial leadership in bold). Details of research funding are in Section d.</p> <p>1. The Division of Clinical Neuroscience investigates cognitive, emotional and brain processes which characterise developmental and adult psychopathology, and translates basic research into clinical practice. It incorporates three labs, with mutual collaboration between the labs, e.g. joint research papers and grant-funded research.</p> <p>1.1 The Developmental Brain-Behaviour Lab (DBBL; Fairchild, Hadwin, Kreppner, Sonuga-Barke, and 2 University-funded RFs), which incorporates the Institute for Disorder of Impulse and Attention, is an internationally renowned centre for research on child and adolescent mental health and disorders. Work includes multi-disciplinary research programmes identifying neural and genetic bases of behavioural and emotional disorders, such as (i) default-mode (resting brain) dysfunction in ADHD, (ii) abnormal brain structure and function, e.g. reduced amygdala volume in conduct disorder and (iii) altered emotional processing in paediatric anxiety. DBBL's longitudinal research (iv) shows that effects of severe early deprivation persist into adolescence and (v) identifies genetic risk factors for vulnerability to effects of deprivation (English & Romanian adoptees study, government- and charity-funded collaboration with Institute of Psychiatry, IOP, 2009-14). DBBL also (vi) advances theories of ADHD (e.g. multiple deficit models) and (vii) tests</p>

treatments for ADHD, oppositional behaviour (New Forest Parenting Programme, Helping the Non-compliant Child intervention; NIMH-funded, 2007-11) and (viii) working memory training for paediatric anxiety. DBBL plays a core role in cutting edge international collaborations in neuroimaging, psychiatric genetics and treatment development.

1.2 The **Experimental Psychopathology Lab (EPL; Bradley, Garner, Mogg)** examines cognitive and neurobiological mechanisms of threat/reward processing in psychopathology. This includes (i) fMRI collaboration with NIMH, US, showing dysfunctional amygdala-frontal connectivity in clinical anxiety; (ii) Brazilian collaboration clarifying cognitive dysfunction and biases associated with psychopathology in ~2000 children; (iii) developing novel cognitive treatment for paediatric anxiety (collaboration with Griffith U, Australia, NIMH, and UCLA); (iv) effects of novel anti-obesity drugs on food-reward processing (with GSK and U Cambridge); (v) developing experimental model of anxiety, using CO₂ inhalation as a tool for testing anxiolytic treatments (MRC-funded collaboration 2012-14 with Medicine, U Bristol, and Emotion and Personality Bio-behavioural Lab).

1.3 The **Emotion and Personality Bio-behavioural Lab (EPBL; Lynch, Stopa and 1 University-funded RF)** develops and tests models, mechanisms and treatments for refractory mood and personality disorders, with implications for treatment in the NHS & worldwide. Projects include evaluating dialectical behaviour therapy (DBT) for (i) treatment-resistant depression (MRC-funded, 5-year, 3-NHS-site, randomised controlled trial, RCT, 2011-16), (ii) anorexia nervosa, and (iii) opiate dependence and borderline personality disorder, showing effectiveness of DBT in reducing drug use and psychopathology (NIDA-funded multi-site RCT; collaboration with Linehan, U Washington, 2003-June 08). Another NIDA-funded study produced a cocaine treatment manual using virtual reality based cue exposure/extinction procedures, 2004-July 08. Applied clinical research is facilitated by a team of 5 academics / clinicians responsible for CBT training.

2. The **Division of Cognition** comprises the **Centre for Vision and Cognition (CVC; Adams, Benson, Donnelly, Drieghe, Graf, Higham, Liversedge, Menner, Redhead, Reichle, Stevenage and 1 University-funded RF)** which engages in experimental research investigating human vision and cognition. CVC researchers have specialist expertise in eye movement research. A major theme concerns eye-tracking in (i) children's and adults' reading, (ii) non-alphabetic reading (Chinese, Arabic, etc) and (iii) computational modelling of eye-movement control in reading and other visual-cognitive tasks. Funding sources include National Institutes of Health 2007-12, ESRC 2009-10 and Leverhulme Trust 2011-14; and collaborations with UCSD, CAS Beijing & NU Tianjin. (iv) Eye-tracking and visual search have also been used to gain new insights into detecting threats in real-world military and civil environments (funded by ESRC 2011-15, BAE Systems 2013, QinetiQ and DSTL Counter-Terrorism Centre 2010-12). This work forms part of the ESRC's Global Uncertainty Programme. Other major research themes include (v) psychophysical processes involved in 3D perception and resolving visual ambiguity (EPSRC 2012-15), (vi) an interdisciplinary research programme examining personal identity in real and cyber world settings to improve identification and assist law enforcement (EPSRC 'Super-Identity' project 2011-14, with 6 other UK and US universities) and (vii) "high-level" metacognition, and memory, e.g. in temporal lobe epilepsy (with Cambridge U & Cardiff U). (viii) CVC also supports collaborations with other labs, e.g. in anxiety (with Div. Clin. Neurosci.), pain (with Div. Human Wellbeing; ESRC funding) and narcissism & consumer behaviour (with Div. Human Wellbeing; Leverhulme funding).

3. The **Division of Human Wellbeing** examines processes involved in psychosocial adjustment or maladjustment, their impact on physical health and psychological well-being and translates these into interventions. It comprises two Centres.

3.1 The **Centre for Applications of Health Psychology (CAHP; Arden-Close, Bishop, Cieza, Graham, Liossi, Schoth, Yardley)** develops and trials complex clinical and public health interventions, which include (i) an EC-funded study 2012-15 to reduce antibiotic resistance across Europe, (ii) a novel approach to managing dizziness in primary care, (iii) intervention to promote safe-sex practices, and (iv) numerous online interventions, e.g. smoking cessation, weight reduction (funders include ESRC 2009-10, MRC 2009-12, EPSRC 2011-13, NIHR 2010-15, EC, & various health charities). CAHP also investigates, develops and validates new methods of assessing and predicting health-related behaviours and outcomes, at individual and population level. This includes (v) coordinating the EU-funded multi-site Paradise project assessing psychosocial difficulties in brain disorders (10 European partners, 2010-13), (vi) working with the WHO and World Bank to develop a cross-cultural survey of disability; (vii) developing a new

perspective on placebo effects and clinical trial methodologies, (viii) assessing cognitive factors in pain, and (ix) advising on DSM-V diagnoses of sexual disorders. CAHP members are extensively involved in large-scale research collaborations, and their work strongly relates to national and international priorities in health.

3.2 The **Centre for Research into Self and Identity (CRSI)** (Gregg, Hart, **Sedikides**, Thomaes, Wildschut, and 2 University-funded RFs) carries out programmatic research on themes relating to self and identity. Methods range from neuropsychological to individual, group and cultural levels of analysis, and from a developmental and adult perspective. CRSI promotes theory construction and testing, and aims to translate empirical findings into beneficial interventions (e.g. contribution to more effective parenting, improving intra-group and inter-group relationships, boosting psychological & physical health). CRSI has: (i) brought nostalgia, a previously neglected emotion, into the mainstream of social psychology by showing its relevance to psychological adjustment (e.g. sense of meaning in life, social connectedness); (ii) debated the extent to which self-enhancement is pancultural (CSRI's position) or culture-specific; (iii) devised & validated efficient measures of self-evaluation motives, thus opening up new avenues for research on the motivational basis of identity; (iv) explored the aetiology, nomological network, and consequences (intrapersonal and interpersonal) of narcissism, and (v) validated a new measure of lie-detection, which is attracting interest from legal scholars and law enforcement bodies.

Developments and changes over the assessment period

In RAE2008 we indicated our aim to **increase programmatic research funding**, which has been achieved. Grant income increased to £2.3M in 2012-13, from £0.9M in 2007-8. Awards to Psychology PIs in the past 3 years averaged £2.9M vs. £1M p.a. in first 2 years of REF period.

We have increased **diversity in research funding**, to bolster financial security. Evidence: Funding sources are varied, e.g. UKRC, charities, pharmaceutical industry, UK, EU and US government agencies, MoD, DoH, NIHR, research consultancy income (see Section d). A striking result of our improved research funding is that we now have a three-fold increase in RFs & RAs (37.8 FTE vs. 12.2 in RAE2008) and technical support is now 5 FTE vs. 3 in RAE2008. Equally striking is the fact that the number of doctoral degrees awarded was 165 vs. 50 in RAE2008.

We also planned to **develop local imaging capability** and this has been achieved in partnership with the University Hospital where we now have structural MRI, fMRI & DTI.

We strengthened the Centre for Visual Cognition's position as an **internationally recognised eye movement centre**. Evidence: Recruitment of Reichle to a Chair. Moreover, Liversedge organised & hosted the 2009 European Conference on Eye Movements and edited the Oxford Handbook of Eye Movements which provides the first comprehensive review of the entire field of eye movement research. CVC is involved in many collaborations in the US, China and Finland, and it has had numerous visiting researchers from the US and China.

Organisational change included the **formation of the Emotion & Personality Bio-behavioural Lab**, following Lynch's appointment, which was made to strengthen the Unit's expertise in large-scale clinical trials. To ensure professorial leadership across cognition, the Memory and Associative Learning Laboratory was incorporated within CVC. The Developmental Disabilities Lab, following retirement of its director, was merged into the Developmental Brain-Behaviour Lab.

We have built up a high international reputation for **conducting innovative, theoretically-grounded research** using a broad range of methods. Evidence: Since 2008, we have over 1500 publications, most in international peer-reviewed journals, with many in leading journals (e.g. JEP: General, J Abnorm Psychol, J Pers Soc Psychol, Health Psychol, Psych Bull, Arch Gen Psychiat). Methods include RCTs, imaging (fMRI, MRI, MEG, ERP), eye-tracking, genetics, psychopharmacology, and innovative approaches to health intervention and disability assessment.

We also provide a **supportive and stimulating intellectual environment** through academic meetings, e.g. weekly department seminars, division/lab/centre meetings, which promote productive dialogue & research training (see also Section c).

We have expanded our **network of multi-disciplinary national and international collaborations** to complement existing local research. Evidence: Staff in all Divisions have a wide range of collaborations, e.g. in Europe, N. & S. America, Australia and Asia (Section e).

We aimed to **promote Psychology at Southampton**. Evidence: Events hosted include:

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- BPS Cognitive Section 25th Anniversary Conference, 2008, ~200 delegates, 3 days of talks
- Biannual European Conference on Eye Movements, 2009, ~450 delegates, 39 Symposia, 170 presentations over 4 days;
- Eunethydis conference on ADHD, 2009, 88 delegates and ~30 presentations over 3 days;
- Bilateral Alliance for Translational Science in ADHD, 2013, 37 delegates, 20 presentations.
- Annual Symposium on Self and Identity, 30-40 delegates yearly.

We have invested significantly in **state-of-the-art labs, equipment, & software**. Evidence: We have spent £600k on Facilities since 2008. We have also developed extensive IT facilities: e.g. for running online studies (iSurvey), participant recruitment (Psychobook), ethics and governance applications (ERGO) (See Section d).

Outreach. To promote psychological research, we set up an active local & national outreach programme. Evidence: CVC presented their research on airport security screening at the Royal Society (2011); our Schools Research Partnership Scheme facilitates recruitment of child research volunteers, and we provide research talks in the community. We maintain a list of older adult participants for various projects, e.g. bereavement, cognition, chronic pain. Our mobile research unit allows off-campus testing of hard-to-reach samples (e.g. MoD personnel). We work closely with NHS Trusts to facilitate access to patients.

Strategic Goals 2014 onwards

1. **Staffing: research leadership:** Professorial appointments will be determined by two principles: augmenting research strengths in existing labs/centres, and introducing promising areas concordant with strategic priorities of research councils and government.
2. **Income:** We aim to secure further programmatic funding and to build on our recent successes in expanding research income. We will diversify further the sources of our research income across industry and health agencies, in line with our goals to increase non-academic research impact and to reduce funding risk.
3. **Research facilities and resources:** To expand our capability in neuroscience, we will use our 3-year £200k investment to build on existing fMRI facilities with the University Hospital NHS Trust, and aim longer-term to secure a research-dedicated scanner. We will purchase state-of-the-art equipment, as necessary to support our research, to replace and expand that available in our centres/labs. Psychology funds will be made available to support productive collaborations elsewhere. To increase recruitment of participants into studies, we will continue to expand our recruitment links with local schools and NHS Trusts.
4. **Impact:** We aim to develop further our translational research from basic science into applications such as clinical assessment and treatment, and security screening. We will continue our work with NHS Trusts, pharmaceutical companies, MoD, and industrial partners, with a renewed focus on applying our research findings, facilitated by the University-funded unit, Public Policy@Southampton, to promote research impact. This unit engages with policy-makers and facilitates academic links through workshops, podcasts, blogs & policy briefings (see REF3a).
5. **International profile:** To enhance our profile and extend our international collaborations and international PGR recruitment beyond the current 4% of students, we will hold regular research conferences/ workshops to reflect our most prominent research themes.
6. **PGR teaching:** We are setting up a Professional Practice Doctoral Training Centre in 2013 to further strengthen the quality of teaching, supervision and support for our PGRs in Clinical, Educational and Health Psychology. To improve and streamline PGR teaching we will increase our contribution to, and use of, teaching in the new ESRC-funded Doctoral Training Centre. This will also allow more efficient use of academic staff teaching time.

c. People, including:**i. Staffing strategy and staff development**

A core strategy is to recruit and retain research-productive staff and to facilitate their opportunities to conduct high quality research. We aim to recruit the best candidates internationally and have recruited 10 Category A staff since 2008 from various countries, including the US, Germany, Belgium, Holland and Spain (44% of submitted staff are non-UK). Specific aims:

- 1.1 To recruit **high calibre research leaders**. Evidence: We gained Faculty funding for three new Chairs in psychology under the University's 'big-hitter' scheme (**Cieza, Lynch, Reichle**).

Environment template (REF5)

1.2 To initiate & sustain a sizeable and vibrant research environment with a **critical mass of staff** in each core domain. **Evidence:** Each Division has between 9 and 12 permanent Category A academic staff, with a mix of permanent faculty, post-doctoral RFs, RAs, & PGR students; 88 staff in total, & 177 PGRs over the REF period. A notable development is that we have expanded our RF & RA staffing to 37.8 FTE vs. 12.2 in RAE2008.

1.3 To ensure that **teaching and administrative loads** allow sufficient time for pursuing high-quality internationally excellent research. **Evidence:**

- Our '**workload matrix**' assigns high weightings to research activities, e.g. quality publications, grant income and number of PGR students supervised, that are 'traded' against teaching and administration. ECRs also have restricted teaching and administration. Moreover, colleagues wishing to resume a more research-intensive role are supported by inclusion in the various psychology research seminars, and access to research leave.
- We have **rationalised our teaching** portfolio: (i) Programmes not affiliated with our research agenda and which are not free-standing financially, have been wound down (e.g. 3 Animal Behaviour programmes). (ii) Income from new programmes supports the research agenda (e.g. MSc Foundations of Clin Psych; CBT Certificate and Diploma). (iii) To streamline PGR teaching and to allow a focus on quality, statistics and design modules have been combined across PhD, DEdPsych & DClinPsych programmes, a practice commended by the BPS/HPCP evaluation team.

1.4 To provide **financial support** for staff research. On average, £20k start-up funds are set aside to promote the research of each new staff member. £600k has been spent over the period for research equipment and facilities.

A priority in recruitment is to strengthen existing research. For example, in the Division of Clinical Neuroscience, Fairchild was appointed, from Cambridge, as lecturer, to expand our work in developmental cognitive neuroscience, in line with increased local access to neuroimaging (MRI, fMRI & DTI) facilities (see Section d). Lynch's setting up of EPBL further augments our expertise in neurobiological aspects of psychopathology and in cognitive therapies.

In the Division of Cognition (CVC), Drieghe's lectureship and then promotion to senior lecturer reflected his research excellence in eye movements and reading, and bolstered expertise in linguistic processing. This domain has been extensively strengthened by Reichle's appointment to a Chair. Benson's appointment to a lectureship (subsequently to Senior Lecturer) followed her Roberts Fellowship, providing continuity in applying novel applications of eye-movement research into anomalies in visual processing in autistic spectrum disorder. Menneer's lectureship further strengthened work on visual aspects of security screening and threat detection.

In the Division of Human Wellbeing, Cieza was appointed under the research leader recruitment scheme on the strength of her research productivity in medical applications of psychology. In anticipation of staff retirement, Graham was appointed, from Oxford, as senior lecturer to provide leadership in sexual health research. Bishop's appointment as lecturer further strengthened CAHP's expertise in applications of health psychology. In CRSI, Hart's and Thomaes' lectureships recognised the strong links between their work and that of this Centre, and bolstered an already strong and productive team working on self and identity.

For the future, the research areas of professorial appointments will be determined by two strategic guidelines: (i) as at present, areas that build on existing research strengths, and (ii) promising areas that are concordant with strategic directions promoted by research councils and government. Future recruitment of non-professorial staff will support areas of existing strength within Psychology, in order to facilitate a strong and sustainable intellectual milieu, and to maintain a capacity to deliver quality PGR education in each specific domain.

Regarding continuity, the majority of professorial staff who were submitted in RAE2008 are still leading their labs/centres (7 out of 10, one retired, one semi-retired, and one recruited to lead Health Psychology at King's/Institute of Psychiatry, London). The typical staffing policy is, as outlined above, to build on pre-existing areas of research expertise, with a view to the longer term.

Development and support of staff research. Psychology's policy of recruitment to areas of pre-existing strengths facilitates a productive research environment where staff can link with others with similar interests, and where they can attend relevant research talks and seminars. We provide training in specific skills e.g. using eye-movement equipment, data acquisition and analysis of complex datasets, use of ERP equipment, and analysis techniques. Academic staff have £1000

p.a. research support, which can be supplemented on application to Psychology's Management Committee, e.g. for equipment, consumables, participant fees, conferences, and research skills workshops. Other local funding includes the University-linked Wessex Medical Research charity.

The University sabbatical scheme of one semester's research leave after every seven is open to all academics, and permits an intensive focus on research. Teaching and administrative workloads are built up from low levels over a 3-year probationary period, to allow new staff to establish their research. Essential research requirements are met through the provision of laboratory space and equipment. Additional support for ECRs includes: (i) Faculty Induction programme; (ii) University and Faculty-organised research workshops; (iii) appointment of research mentors; (iv) representation on Faculty Research and Enterprise Committee, Graduate School Committee and Ethics Committee; (v) financial support for research networking and conferences; (vi) University's £160k 'Adventures in Research' Grant Scheme; (vii) V-C's and Mayflower PGR Scholarship Scheme to help set up a research programme; (viii) a Faculty ECR Champion (Liversedge); (ix) annual training initiatives in experimental techniques, and (x) the Researcher Talent Development Programme targeted at ECR high-fliers and providing advanced training in research skills.

Psychology is further supported by Faculty's £60k p.a. Strategic Interdisciplinary Research Development Fund. The Research Staff Development Team from the University's Professional Development Unit (PDU) provides advice and over 30 annual workshops (e.g. grant-writing, reviewing, research career planning, public engagement, media and presentational skills, research leadership). There is additional training on statistical packages and PGR supervision. There is an award scheme for PGR supervisors. The University's Research and Innovation Services (RIS) supports research collaborations, e.g. advising on research funding, contracts, ethics applications and commercialisation. The EU Office facilitates applications for EU funding.

Implementation of the Concordat to Support the Career Development of Researchers. The Pro-V-C for Research actively promotes the Concordat (e.g. reviewing practice, establishing professional development). The University's implementation of the Concordat is acknowledged in the HR Excellence in Research Award (2012) from the EC, which also reflects alignment with the European Charter for Researchers and compliance with the QAA Code of Practice for Research Degree Programmes. Psychology supports and promotes the Concordat.

Equality & diversity (E&D). Psychology is committed to ensuring a positive & supportive working environment for all staff and students, with equality of work and educational opportunity based on merit, irrespective of background, beliefs and socio-economic context. E&D issues are a key part of the University's Strategy, with a Dean as E&D Champion. These issues are embedded in each Strategic Plan (Education, Research, Human Resources and Widening Participation). There are HR policies on equal opportunities, dignity at work and study, gender identity, and religion and belief. There is an on-going Equal Pay audit. University communications comply with E&D guidance. Equality training is promoted for all staff, and REF staff selection is explicitly subject to this policy. The percentage of female Category A staff submitted in UoA4 is 44%. Athena SWAN have renewed (2013) our University Bronze award, reflecting the institution's aspirations to improve fairness and equality for women.

Effective integration of clinical academics and NHS-employed researchers. There have been long-standing links and productive research publications between DBBL, EPL, CVC & CAHP and Medicine. These links facilitate access to clinical samples and provide a basis for clinically-focused research grant-funded programmes (e.g. research with Baldwin, Kendrick, Kennedy, Lewith, Little, Peveler, Thompson – clinical academics with joint NHS appointments).

ii. Research students

To enhance the University's central provision the **Researcher Development and Graduate Centre (RDGC)** fosters best practice and delivers skills training and personal development opportunities for PGR students. The ESRC-accredited **Doctoral Training Centre (DTC)** in Social Sciences is one of 21 across the UK, offering 4-year multidisciplinary PGR programmes. Among the 20 study pathways offered, there is a mainstream one in Psychology, as well as pathways in Gerontology, Health Psychology, Social Science methods, Social Statistics and Health and Wellbeing. The taught 1st year includes courses and project work tailored to students' backgrounds and research interests, and provides basic research training of our PGR students (~40 attend p.a.), prior to the final years of PhD or professional doctoral research. Three

Environment template (REF5)

Psychology staff contribute extensively to this research training. Other PGRs receive training through the EPSRC-funded Web Science and Complexity DTCs.

Psychology is centrally involved in PGR education; since 2008, we have had 177 PGRs, with 165 completions in 2008-13. Moreover, one of our staff is the Faculty Associate Dean for Education and Student Experience. The programmes offered within Psychology are the MPhil/PhD (47 students), DClinPsych (68 students), DEdPsych (54 students), and MPhil/PhD in Health Psychology (8 students), the latter programme being accredited by both the BPS and HCPC, providing eligibility for HCPC registration and a path towards Chartered and Health Psychology status. This is one of only two UK programmes that deliver a PhD with Stage 2 qualification to become a Chartered Health Psychologist. The BPS accreditation team (in 2013) commended our Health programme for a 'culture of research excellence'.

These programmes have been run for some years with staff from each Division contributing to their success. PGR training and research supervision are also provided within the Divisions, Centres and Labs, where there are talks, seminars and workshops, many of which are given by PGRs themselves. Psychology PGR students organise an annual conference to provide a further opportunity for students to present their work, to learn what their peers are doing, and to network with staff and other students. In 2013 there were 135 delegates, 33 presentations and 38 posters.

We have had MPhil/PhD studentships from MRC, BBSRC, ESRC CASE, Gambling Trust, Leverhulme Trust, MoD, and many international sources. University studentships have included: Mayflower (x4), V-C (x7), and ESRC Doctoral Training Centre (x4). Staff are encouraged to explore innovative sources for PhD-funding, including the use of consultancy funds, knowledge transfer packages, external stakeholder funding, and University-based funds (e.g. in conjunction with the WebScience DTC in Electronics & Computer Sciences). The DClinPsych is NHS-funded and the DEdPsych is CWDC and local authority-funded. Start-up costs for new staff incorporate studentship funds, where appropriate, and Psychology has earmarked £0.5M over 3 years to underwrite PGR bursaries. Cieza coordinates MARATONE (Mental Health Training through Research Network in Europe), a multidisciplinary Marie Curie/EC project and PhD training programme, funding 14 PhDs across Europe with 2 at Southampton (€3.7M, 2013-17).

Plans for PGR. The Faculty is enhancing the culture which underpins the recruitment and supervision of PGRs, regarding them as essential for our research endeavour and as full members of our research groups. Explicit guidelines for best practice in doctoral training have been drawn up by Faculty to provide a benchmark for evaluation of our programmes. International scholarships are planned to attract the best researchers. Psychology plans to further increase the role of PGR student demonstrating and teaching, to allow them to supplement other funding, and enhance their training and experience, supported by the Postgraduate Introduction to Learning and Teaching (PILT) section of the University's Learning and Teaching Enhancement Unit. Students can gain credits towards Masters-level education qualifications, and towards membership of the Higher Education Academy. To further expand intake of high-calibre PGR students we will strengthen our current activities to i) identify and encourage our top final year undergraduates to consider research training with us; ii) to increase our attendance and profile at recruitment conferences in the UK and abroad to encourage additional interest in us as a PGR choice, and iii) to advertise our PGR opportunities earlier in the year and more widely in the UK and internationally.

Career destinations of PGRs. Examples: Postdoctoral positions at Kings's College (IoP) & Universities of Oxford, Cambridge, Manchester, Queen Mary's, and Copenhagen. Lectureships (or equivalent), e.g. at the Universities of Ghent, Surrey, Bar-Ilan, Izmir, and Bochum.

d. Income, infrastructure and facilities

Psychology's external research income for 2012/13 was £2.3M, up from £1.7M in 2011/12, and more than double the average income of £0.9M p.a. over the RAE2008 period.

Regarding awards to PIs in Psychology, since 2010-11 we have averaged £2.9M p.a., which is a huge increase from an average of £1M in 2008-9 and 2009-10. Examples are given below of awards since 2008 on **grants held at Southampton with PI in Psychology**.

Division of Clinical Neuroscience: Grant awards for PIs totalled ~£4.7M. E.g., NHS, NIHR & MRC (9 awards totalling ~£3.3M), ESRC (1 award, £630k), and other sources (e.g. European Commission, Wellcome Trust, Shire, Action Trust; 6 awards totalling £950k).

Division of Cognition: Grant awards for PIs totalled ~£2.4M. E.g., EPSRC (3 awards totalling ~£1M), ESRC (2 awards totalling ~£650k), and government & other sources (e.g. MoD, DSTL,

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BAE, Leverhulme; 6 awards totalling ~£754k).

Division of Human Wellbeing: Grant awards for PIs totalled ~£3.5M. E.g., EPSRC (1 award, £872k), European Commission (2 awards totalling £837k), ESRC (6 awards totalling ~£480k), DoH, NIHR & MRC (5 awards totalling ~£331k), Leverhulme (3 awards totalling ~£270k), and other charities (e.g. Templeton, Wellcome, Asthma UK, Meniere and MS societies; 7 awards, ~£485k).

Grant awards for Co-Is and for research conducted at other institutions are not included in the preceding examples; e.g. DBBL members have grant awards totalling ~£5M; EPBL staff have awards of ~£4.5M for projects conducted in Southampton and other institutions; CVC staff have awards of ~£4M; and CAHP staff have collaborative awards of ~£10M as PIs and ~£25M as Co-Is.

Main lab facilities shared by Staff & PGR students. We have 6 experimental/technical staff (5 FTE) to assist with programming, setting up experimental tasks, dealing with technical problems, advising on, and selecting equipment, etc. Our facilities are co-located in the Psychology Building, unless indicated otherwise. These include 3 Electro-physiological labs with ERP and EEG, one of which allows concurrent eye movement recording; Eyelink and ASL eye-trackers; portable eye-trackers; binocular dual Purkinje image eye-trackers with shutter goggles; Haptic arm; two Biopac psychophysiological labs, one based in Psychiatry, for assessing EOG, EMG and fear-potentiated startle; the lab in Psychiatry also allows us to conduct psychopharmacological interventions. We have facilities for tDCS and CO₂ stress manipulation concurrently with eye movement and ERP recording. We have multiple experimental labs with PCs and software for accurately timed stimulus displays and response recording (E-Prime, Presentation); pain lab; social psychophysiological lab; MRI facilities: structural, functional & DTI with two 3T machine upgrades (Siemens Skyra) in Dec 2013, shared with the University Hospital, supported by priming funds of £200k from Faculty. £25k was spent upgrading the existing 1.5T University Hospital scanner to allow MRI scanning of the brain, and £35k pilot scanning costs were provided. Faculty also contribute 0.2FTE towards an MR physicist and £28k for stimulus presentation equipment for use with the new scanners. The majority of our equipment has been provided within the last few years, and we regularly update as necessary. We have a test library with a wide range of general, clinical, educational, & health assessment tests. We have a custom-built mobile research unit which allows easy access to, and testing of, participants in schools and army sites.

Use of facilities with collaborators. This has been extensive, e.g. fMRI & structural MR (with NIMH, KU Leuven, Ghent, New York U; Cambridge U); MEG (Aston); pharmacological interventions (GSK, Cambridge U; Free U Amsterdam); eye-tracking (e.g. UCSD, US; Tianjin China, Ghent). We have access to large-scale carefully diagnosed clinical groups (e.g. NIMH; Sao Paolo, Brazil) and specialised samples (e.g. Romanian adoptees, with Institute of Psychiatry, London) which facilitates our basic research and clinical interventions.

Research Governance: policy and practice. Those working with human tissues, organs or data arrange sponsorship and insurance through Southampton's Research Governance Office (RGO), which provides guidance and training. All research is registered on Ethics and Research Governance Online (ERGO) which determines risk level, and provides input to the Faculty Ethics Committee (FEC). Higher risk studies are approved by the RGO, insurers and the FEC, while medium/low risk studies are dealt with by the FEC. The University's academic integrity policy gives direction on good academic practice and procedures for dealing with research misconduct.

e. Collaboration or contribution to the discipline or research base (Examples)

A distinctive feature is the wide range of productive national and international **collaborations** with Academia, Government, Health agencies and Industry:

Division of Clinical Neuroscience. DBBL: U Ghent, Leuven, Aarhus, Bergen, NYU, Free U Amsterdam; International Multi-centre ADHD Genetics Consortium (IMAGE) (London, Mannheim, Amsterdam, New York, Tel Aviv, Barcelona, Zurich). **EPL:** NIMH; Federal U Rio Grande, Brazil; Griffith U, Australia; U Cambridge, Bristol, Aston, Liverpool, Maastricht, Copenhagen, Michigan, Columbia, Vanderbilt, Bonn, Stanford, Johns Hopkins, Georgia State, Penn State, Tulane, California (LA). **EPBL:** U Heidelberg, Chicago, Washington, Exeter; Simon Fraser, Duke, Harvard, Notre Dame, Ohio State, St Patrick's U Hospital; King's College London; S.London & Maudsley NHS Foundation Trust, Devon Partnership NHS Trust.

Division of Cognition. CVC: U Mass, Indiana, Penn State, Ghent, NYU, Utrecht, Amsterdam, York (Canada), Manitoba, Minho, California (SD), Oxford, Kent, Bath, Leicester, Dundee, Pittsburgh, Turku, Tianjin Normal U; Chinese Academy of Sciences; Pacific NW National Lab; UK

Govt: Home Office, Business, Innovation and Skills, Centre for Applied Science and Technology.

Division of Human Wellbeing. CAHP: U British Columbia, Harvard, Kentucky, New Brunswick, Sydney, California (SF), Indiana, Cambridge, Oxford, Bristol, Birmingham, East Anglia, UCL, King's College, Imperial, London School of Hygiene and Tropical Medicine. Collaborators in Poland, Netherlands, Belgium, Spain, Sweden, Croatia, Finland, Greece, Germany, Italy, Switzerland, and Canada; Gt Ormond St Hospital. **CRSI:** U Ohio, Rotterdam, Clermont-Ferrand, Tennessee, Toronto, Amsterdam, Groningen, Limerick, Mannheim, Missouri, Minnesota, Aalborg, Konstanz, N. Dakota State, N. Illinois State, Bar-Ilan, Sun Yat-Sen, Humboldt U Berlin, Catholic U of Milan, Beijing Academy of Sciences.

Work with external bodies, Government agencies, NHS, industry. Member of WHO ICF Research Branch Steering Committee, Leader of Measurement Group of WHO Functioning and Disability Reference groups, Scientific Advisor to WHO and World Bank on disability, Scientific Advisor, Sydney U and Commonwealth of Australia on clinical assessments (**Cieza**); Member APA DSM-5 Workgroup for sexual & gender identity disorders (**Graham**); Member of NICE Guideline Development Groups: pain management (**Liossi**), social anxiety disorder (**Stopa**); Member of Guideline Development Group of Assoc. of Paediatric Anaesthetists for pain management (**Liossi**); Member of Expert Reference Group on Improving Access to Psychological Therapies (**Lynch**); Member of Shire ADHD Ed. Institute, European ADHD Guidelines Group, Input to NICE on ADHD guidelines (**Sonuga-Barke**), DoH Pandemic Influenza Committee, Core member, NICE Public Health Advisory Committee (**Yardley**); Research consultancies: GSK (**Bradley & Mogg**), Shire, Janssen Cilag, AstraZeneca, & Medici (**Sonuga-Barke**), MoD/DSTL (**Liversedge, Donnelly**).

Membership of grant committees, etc. ESRC Research Grants Board, & Review Committee for Quality Assurance Netherlands Universities (**Sedikides**); grant panels, MRC Ageing, & Physical Activity (**Yardley**), RAE2008 sub-panel, Psychiatry, Neuroscience & Clinical Psychology (**Bradley**).

Editors. Editors-in-Chief, J Sex Res. (**Graham**), J Child Psychol & Psychiat (**Sonuga-Barke**), Psychol & Health (**Yardley**), Assoc Eds, Visual Cognition & J Res Reading (**Liversedge**); Guest Eds, Pers & Soc Psych Bull, & Emotion (**Sedikides**).

Editorial boards. J Abnorm Psychol; Emotion; Frontiers in Psychopathology (**Bradley**); Cognition & Emotion (**Garner**); Personality disorders: Theory Res Treatment; Aging & Mental Health; Int J Geriatr Psychiat (**Lynch**); J Abnorm Psychol; Frontiers Psychopathology J Exp Psychopathology; J Behav Ther & Exp Psychiat (**Mogg**); ADHD; Behav Brain Functions (**Sonuga-Barke**). Frontiers in Percept Sci (**Graf**); Canad J Exp Psychol (**Higham**); J Eye Move Res; Psychonom Bull & Rev; Linguistic Compass (**Liversedge**); J Eye Movement Res; Psychol Rev; Visual Cognition (**Reichle**). Brit J Health Psychol; Altern Therapies Health Med (**Bishop**), Disability & Rehab; Int J Rehab Res; J Accessibility & Design for All (**Cieza**); J Sex & Marital Therapy; Int J Sexual Health (**Graham**); Self & Identity (**Gregg**); Brit J Health Psychol; J Health Psychol; Social & Personality Compass; Contemp Hypnosis (**Liossi**); JEP:Applied (**Menneer**); Pers & Soc Psychol Rev; J Pers & Soc Psychol; Sage Social Psychol Texts (**Sedikides**); Self & Identity; Pers & Soc Psych Bull; J Pers Soc Psychol (**Wildshut**); Social Theory & Health (**Yardley**).

Fellowships. Association for Psychological Science (**Bradley, Mogg**), Scientific Society for Study of Sexuality (**Graham**), Society for Experimental Social Psychology (**Gregg**), Society for Experimental Social Psychology (**Sedikides, Wildshut**). Academicians of Academy of Social Sciences (**Sedikides, Yardley**). **Awards.** Kurt Lewin Medal for outstanding scientific contribution, Euro Assoc Soc Psychol; Distinguished Service Award, Int'l Society for Self and Identity, BPS President's award for distinguished contributions to psychological knowledge (**Sedikides**).

Conference organisation. Programme chair, Eunethydis Conference (**Sonuga-Barke**); Host & organiser of Euro Conference on Eye Movements (**Liversedge**); Host of BPS Division of Health Psychology, & UK Society of Behav. Med. (**Yardley** with CAHP members); Advisory Board for Persuasive Technology - Enhancing Sustainability and Health (**Sedikides**).

Additional. Keynotes: **Sonuga-Barke** (20), **Sedikides** (6), **Yardley** (4), **Liversedge** (3), **Cieza, Drieghe, Benson**; Scientific coordinator, Paradise EU-funded project (**Cieza**); President, Int'l Academy of Sex Research (**Graham**), Vice-Chair of National Research Ethics Service committee, Oxfordshire A (**Graham**); Co-chair of annual DBT int'l strategic planning meeting, Chair of int'l think-tanks on (i) neuro-regulatory theory; (ii) anorexia nervosa (**Lynch**); Visiting professorships: Ghent U, New York U, Aarhus U (**Sonuga-Barke**), Aalborg U (**Sedikides**).