

Institution: Lancaster University

Unit of Assessment: 4 - Psychology, Psychiatry and Neuroscience

a. Overview

Psychology at Lancaster's aim is to promote the very highest quality psychological research, sustained through an energetic and productive research culture with expanding excellent laboratory facilities and quality research support services. In all previous RAEs, research activity of Psychology at Lancaster University has been recognised as predominantly internationally excellent. Since RAE 2008, we have further enhanced the research environment at Lancaster by: (1) reorganising Psychology into two thematic research centres; (2) recruiting 15 academic staff (2 professors, 1 reader, 2 senior lecturers, 10 lecturers) to maintain faculty numbers and to establish critical mass for international presence in multiple areas of psychological research; and (3) investing in infrastructure for new cutting-edge laboratory facilities and equipment. Table 1 summarises evidence of Psychology's achievements in growing research sustainability and vitality.

Table 1. Quantitative evidence for sustainability and vitality of research.

Evidence of Sustainability				
Indicators	RAE1996	RAE2001	RAE2008	REF2014
Category A staff	20 FTE	23 FTE	31 FTE (100% staff submitted)	25.1 FTE
Research quality profile	5	5A	4* (10%), 3* (30%), 2* (45%)	
PhDs awarded	16	32	34	44
Research income awarded	£0.4M	£1.6M	£3.9M	£7.1M
Peer reviewed publications per annum	31	43	45	54
Contract research staff	13	18	48	62
Mean IF of REF outputs	1.68	1.80	2.78	4.30
Evidence of Vitality				
Editorial positions in leading journals (Editor or Associate Editor)				12
Invited presentations at leading conferences and workshops				41
Conferences/workshops hosted				22
Minimum % research time per staff member				32
Sabbatical person months taken by Category A staff				166
Sabbatical leave FEC				£1.54M

Note: 21.7 submitted to UoA4, 3.4 submitted to other UoAs.

In 2010, we established two research centres in Psychology in order to create critical mass for developing internationally-leading research themes: The Centre for Research in Human Development and Learning (*CRHDL*) and the Centre for Cognitive and Social Research (*CCSR*). Each Centre provides a hub for interdisciplinary work in cognate topics, with affiliated membership of the Centres from academics in other Departments in the University (including Computing, Education, Environment, Health and Medicine, Linguistics, Management, and Medical Physics), as well as advisors from industry, charities, education and health services. Psychology also contributes to three University *Interdisciplinary Centres*: *Security Lancaster*, the *Centre for Ageing Research*, and the *Centre for Corpus Approaches to the Social Sciences (CASS)*.

The *CRHDL* conducts research in development and learning at all stages of life, from infancy through childhood to adulthood. Research methods applied in the *CRHDL* combine behavioural observation and experimentation, computational modelling, and neurophysiological techniques, including TMS, EEG, and NIRS. The *CRHDL* comprises three research groups: The newly established Developmental Neuroscience group combines neurophysiological and behavioural measures to investigate development over the lifespan (Crawford*, Geangu, Parise, Reid, Sunram-Lea*) [* indicates staff member entered to REF under another UoA], the Social and Perceptual Development group studies social and perceptual processes in early childhood (Allen, Bremner,

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Hopkins, Lew, Lewis), and the Language, Memory and Literacy group investigates language acquisition and processing from infancy through adulthood (Alcock*, Cain, McNorgan, Monaghan, Towse, Westermann). The CRHDL has sustained its reputation for research excellence, as evidenced by generating £3.3M research income, publishing 181 peer-reviewed papers in the REF period, 67 of which are in the top 10 ISI ranked journals for Psychology, with 4.39 mean citations per article.

The *CCSR* draws together researchers specialising in cognitive and social psychology, nurturing synergies achieved by integrating these subdisciplines, whilst also encouraging collaborations with themes in CRHDL. It comprises two groups: The Perception and Embodied Cognition group examine effects of synaesthesia, cross-modal and multi-modal cognitive processing, and effects of input and output systems on human behaviour (Connell, Linkenauger, Lynott, Plack, To, Walker); and the Social Processes group (Conchie*, McClatchie, McCulloch, Rakic, Taylor) focuses on the effects of emotion, identity and motivation on social cognition and interpersonal behaviour. A central theme throughout CCSR's research is the highest quality science that also finds application to societal concerns such as education, human computer interface design, social inclusion, safety and security. The CCSR has achieved substantial research income (£3.8M), and, whilst comprising 36% early career researchers, has published 140 peer-reviewed papers in the REF period, including 43 in the top-10 ISI ranked journals for Psychology, with 5.37 mean citations per article.

Interdisciplinary Centres. The interdisciplinary research Centres at Lancaster University are a key strategic approach of Psychology to proactively engage with national and international research priorities: *Security Lancaster* addresses issues of national and international security and houses Psychology's influential research into investigative expertise (Taylor is a founding member and co-Director, Towse); *Centre for Ageing Research* (Crawford*, Towse are founding members) addresses health and social implications of an ageing population in the developed world; and *CASS* (Cain is a founding member, Monaghan), supported by ESRC Centre grant funding, applies corpus analysis methods across the social sciences, and includes a core Psychology project on language/literacy.

b. Research strategy

Research strategy and achievement of strategic aims (2008-2013)

Since 2008, our strategy for enhancing sustainability and vitality in excellent research has been through:

1. The *establishment* of two centres in Psychology to provide critical mass for the development of large-scale research programmes with international reach.
2. The *construction* of interdisciplinary research teams in order to position our research to drive and respond to challenges in terms of national and international research priorities.
3. The *recruitment* of internationally excellent staff, to establish strength in multiple research areas, with a focus on developing promising early career staff.
4. The *expansion* and development of future-proof research facilities, e.g., neurophysiology laboratories, with investment in new equipment and bespoke laboratory space.
5. The *extension* of research applications to engage with users and achieve measurable, real world impact.

1. The Establishment of Two Research Centres

In 2010, we formed two research centres in order to develop critical mass in multiple areas of psychological research. The CRHDL comprises 16 core faculty. The CRHDL promotes Psychology's long-standing excellence in experimental developmental psychology through expansion into new methods including eyetracking and pupillometry, neuroimaging and neurophysiology, and extension of its remit to learning throughout the lifespan. The Centre now comprises researchers applying developmental psychological techniques from birth throughout adult life, particularly in application of neurophysiological techniques.

The CCSR, with 11 core faculty, draws together growing strengths in fundamental areas of cognition with social cognition and forensic psychology. The combination of subdisciplines within the CCSR ensures a theoretical research base for societal and forensic research activities, with practical issues in turn driving theoretical development. CCSR extends Psychology's core research base in cognitive, social, and forensic psychological research, creating an environment for productive interaction between these traditionally separate subdisciplines.

The two Centres have created collaborative networks of psychologists from across the University by providing a hub for psychological research activity. Our cutting edge research facilities are utilised by psychologists and interdisciplinary partners (including researchers in the Departments of Clinical Psychology, Educational Research, Linguistics, and Computing); we have had 120 external research visitors at seminars since 2008, attracting university-wide audiences as well as academics from across the North West, enabling networking and communication of research; and our annual presentations to research users facilitate interactivity with industry, government, charities, educational and health practitioners. Since 2008, visibility of research in terms of number of invited talks at international meetings, the number of international journal publications and citation rates for publications has substantially increased (see Table 1). The research environment of Psychology has also enhanced our profile of editorships, board memberships, government advisory panels, and conference and workshop organisation (see Section e, below).

Research grant preparation and administration for the Centres is supported by 8 administrators in the University's Research Support Office and a 60% FTE senior administrator working exclusively within Psychology. Consequently, since 2008, Psychology's research trajectory has continued upwards, with significant diversification and growth in research income (see Table 1). Our portfolio of research income includes substantial UK Government, industry, and charity input alongside regular RCUK grant success.

2. Promoting interdisciplinary research.

Psychology at Lancaster has interactivity and multidisciplinary perspectives as part of its central philosophy. Indeed, 4 academic members of staff from Psychology at Lancaster are contributing for REF to other Units of Assessment in Allied Health, English Language, and Management. The two Centres were established to promote synergies between subdisciplines of psychology, and much of our research is now cross-disciplinary, and benefits from collaborations with other departments (e.g., Computing: 2 recent EPSRC joint grants, Linguistics: CASS, ESRC Centre grant) as well as joint research programmes within the University Centres for Security and for Ageing Research.

Psychology at Lancaster is attuned to national and international research priorities and initiatives, which contribute to the strategic aims of Psychology's two Centres, constituted to bring multi-method approaches and critical mass to research topics. To support interdisciplinarity, we have appointed two new staff in investigative expertise to join Security Lancaster: a new faculty member and a five-year tenure track research post in forensic and investigative psychology.

This strategy is now resulting in a large increase in large-scale grant applications (4 applications > £1M in 2012/13) and success in funding sources from Government initiatives requiring cross-disciplinary security research (e.g., award income from Government bodies since 2008 is £3.2M).

3. Recruitment in key research areas.

A principal research strategy is to ensure that contemporary and cutting-edge multi-method expertise is present within Psychology. In CRHDL, we have appointed to expand the range of methodological expertise in neurophysiological and computational techniques. A reader and two lecturers with internationally-leading expertise in infant studies using EEG and NIRS (Geangu, Parise, Reid) have been appointed to complement existing research in EEG across the lifespan. We have also expanded the computational neuroscience modelling group with a new professorial and lecturer appointment (Westermann, McNorgan). Geangu and Westermann also contribute additional expertise to eye-tracking and pupillometry methods, extending pre-existing expertise of four faculty using eye-tracking from infants to adults within Psychology. We have strategically focused on sustainable neurophysiological methods within CRHDL that are especially appropriate for neurophysiological measures of children.

In terms of extending the core research base in CCSR, we identified investigative expertise as an area for investment, aligned with RCUK and EU research priorities in security research, and have appointed two faculty members to this group. In tandem, we identified social cognition as a key area to develop as a research strength bridging traditional subdisciplinary groups in cognition and social psychology. We consequently appointed three new lecturers in social cognition (McClatchie, McCulloch, Rakic). Embodied cognition is a third key area for research expansion, binding together current neuroscience and behavioural studies within Psychology. Consequently, we appointed a professor, two senior lecturers and two lecturers to supplement existing strengths

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in perception and cross-modal cognition (Connell, Linkenauer, Lynott, Plack, To).

4. Expansion and development of future-proof research facilities (see Section d for more details)

We have consolidated and extended excellent research facilities for infant and child testing in the CRHDL, including a new neurophysiology testing suite. The CCSR's research facilities have also been considerably extended since 2008.

5. Enhancing impact (see Impact Statement for more details)

We consider engaging with users of research a key driver for new research programmes as well as applications of our research. Engagement with users of research has been accomplished in the CCSR through secondment of staff to the Home Office (Taylor, 2009-2010), secondment of PhD students to Ministry of Defence and Scottish Office (2011 and 2012), and collaborations in 3 CASE studentships, 5 DSTL studentships, and 16 grants funded by UK Government Offices.

We have also conducted two HEIF-funded initiatives within Psychology to foster knowledge exchange with research users. In the CRHDL, events for communicating literacy and developmental disorders research to practitioners were attended by 79 staff from NHS and educational services, and resulted in one CASE studentship and a charity-funded grant. In the CCSR, events for security and investigative expertise practitioners were attended by 61 collaborative external delegates from police and local and national government, and research exchange has been realised through 29 grants funded by UK Government offices.

Future strategic aims and goals (2014-2019)

Our main objectives in research are to:

1. Extend capacity for highest-quality research. We will continue to make additional appointments in key areas of research to sustain and increase our research excellence, with particular focus on our current strengths but also direction towards national and international research priorities. We intend to prioritise the following areas for new appointments: (1) Developmental neuroscience, to further strengthen contemporary approaches to infancy research, involving further expertise in EEG, NIRS, eye-tracking, and computational modelling; (2) Cross-modal processing and embodied cognition, to expand the current group applying behavioural, computational, and neuroscience methods to secure internationally recognised critical mass in this area, also building upon current emerging synergies between social and cognitive research in Psychology; (3) Investigative expertise, interviewing, and security, in order to further enhance the pure research base for the excellent applied research conducted by this group. The focus on these research groupings aims to ensure capability for large-scale research programmes to be located in Psychology. Since 2008, we have increased our grant funding awarded by 182%, but these grants typically involve small groups of researchers. Our grant funding objective is to add to these smaller grants (i.e., less than £500k) with large-scale, long-term research programme grants. This strategy is already beginning to come to fruition with large-scale pending programme grants to EU and RCUK currently standing at £4.5M.

2. Develop infrastructure and facilities. We have undergone substantial expansion in research space and facilities since 2008. Our future focus will be on improving integration of research space, and refurbishment to ensure utility for long-term research programmes. Currently, our facilities for CCSR are divided across two floors of a research and teaching building. We plan to cluster together the laboratories to further improve efficiency and quality of the testing environment. For CRHDL, we monitor usage of the new neuroscience facilities, and have potential for expansion as need requires.

3. Extend research student recruitment. We have broadened our research student funding base beyond the standard RCUK-funded route, through increasing CASE studentships, industry-sponsored studentships, attracting self-funding students, and funding of studentships through Departmental and University sponsorship. We will work to increase student recruitment through identifying service users (see following point) to fund studentships undertaking high-impact pure research with potential for identified applications.

4. Increase involvement of service users. We have established advisory panels comprising practitioners, charity representatives, and industry specialists to formalise the involvement of

service users in our research planning. The panels meet annually with researchers in Psychology to discuss applications for current research outcomes and future research needs for users. We envisage extending these collaborations via the advisory panels, by increasing the membership of the panels to encompass all areas of research in Psychology.

c. People:

i. Staffing strategy and staff development

Psychology's research strategy aims to provide time, facilities, and technical and administrative support in order that the highest quality research can flourish.

Appointment Strategy

Our staffing strategy has been to maintain faculty numbers in Psychology, and to use the opportunity resulting from staff retirement and departure to identify and invest in future leading researchers, to maintain research excellence in areas of strength in Psychology, and to develop new leading groups. We have appointed 15 new staff since 2008, 7 of whom are early career researchers. These appointments have established developmental neuroscience as a leading force at Lancaster, ensured that investigative psychology is maintained as a research strength, and have established new leading groups in embodied cognition and social cognition. All staff are recruited in open competition from the widest pool available, and research excellence is the criterion for appointment.

Staff Development

Psychology has a research-led policy and process for staff development and management, and all staffing strategies and support are consistent with the University's EU "HR Excellence in Research" award. All academic staff have at least 32% workload assigned to research activities. New lecturer and senior lecturer appointments have 70% workload assigned to research for two years, after which all lecturer staff retain 45% research time by ensuring reduced administrative loads.

All new appointments are assigned an academic mentor who provides guidance in research development and career progression. Separate to the academic mentor all academic staff are also assigned to a research mentoring group. These are headed by professors who provide research leadership and advanced support for grant and paper writing through peer review and target setting. We have found that staff development for Early Career Researchers is particularly assisted by strategic targeting of high-impact journals, and advice on theoretical motivation and presentation of research to increase impact, resulting in successful career progression and improved quantity and quality profile of publications across Psychology (see Table 1). All staff undertake annual performance and development review (PDR) with the Head of Department to identify research targets and training and resource needs, and to plan for meeting internal promotions criteria. Staff are entitled to apply for sabbatical leave of 1 term after 7 and this has been granted in all cases for staff in Psychology (see Table 1). Since 2008, staff destinations reflect effective staff development at Lancaster: Of 12 staff departing, 8 gained appointments to chairs/deans, and 2 early career researchers secured senior lectureship posts.

Contract Research Staff (CRS)

Psychology is fully committed to the Concordat to Support the Career Development of Researchers and has established procedures to support its implementation. For instance, CRS posts are regularly submitted to HERA evaluation to determine the pay grade and are advertised extensively (e.g. LU website, jobs.ac.uk and specialist forums). Members of appointing panels receive training on "recruiting the best", and CRS are appointed for their research excellence. All new CRS are provided with a formal induction process involving training in research practice, presentation and writing skills, and career progression awareness. Each has an independent mentor in addition to their line manager and are incorporated into one of Psychology's research Centres as full members, including accessibility to and involvement in Psychology's organisational structures; e.g. they may attend staff meetings, and are also represented at these meetings by a CRS representative. CRS are supported in networking beyond the university; e.g., CRS participate in the publication and dissemination of their work at an international level, via Unit and Faculty support for networking activities in addition to grant-related funding. Psychology recently funded a two day research conference for CRS staff across the UK, which was an event organised by CRS

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in Psychology. All CRS undertake annual performance and development review (PDR) with their line manager. PDRs identify training and research needs and direct CRS to University and national training courses to address these needs, to enhance their transferable skills and further professional development. Career guidance is provided by members of academic staff, as well as in one-to-one interviews with the University's careers service, and connections and secondments are provided with practitioners in applied psychology in areas such as clinical psychology, education, pharmaceutical industry, police and security services. CRS are prioritised for internal administrative support in applying for internal and external research funding, such applications are expected and supported by the researcher's line manager and appraised in annual personal development meetings. CRS staff have been successful in securing funding from RCUK and industry sources as PI or CI, with 50% success rate for CRS staff making these applications.

Diversity and equality

Psychology has an excellent record of accommodating the flexible working needs of all staff (e.g., parental leave, part-time working and working from home) thereby enabling them to combine work and family commitments. Careful management of staff workloads has resulted in a gradual return to 100% employment following 4 maternity/adoption leaves taken since 2008. Psychology actively contributes to the University equality and diversity agenda: with a University Equal Opportunities Officer embedded within Psychology. All staff are required to attend the University equality and diversity development training course and Psychology is represented on the University's Work-Life Balance Solutions Group. Staff regularly participate in Athena Swan initiatives: Psychology holds informal lunch meetings for women to discuss career development; staff attended the 'Making Professor Event' and contributed to the Faculty networking event for female academic staff. Cain was an organiser and Chair of the "Career Progression for Women in Psychology" workshop (Nottingham, 29 November 2011). The gender profile of Psychology continues to be one of the most balanced in the University with 44% female academic staff. Issues of diversity and equality are actively embedded in selection and recruitment processes. Career progression is also highly effective: 80% of female staff in Psychology who have been in post ≥ 2 years have applied for promotion, and 75% of these have been successful (to professorial/senior lectureship positions).

ii. Research students

Research students (RS) are viewed as the engine of Psychology's research culture. Psychology ring-fences research and networking funding and experimental participant resources for RS, provides dedicated research facilities, and promotes their research and transferable skill training. RS are supported by a full time postgraduate coordinator based in Psychology, who advises on admission, registration, training, supervision and examination arrangements.

Our doctoral programme continues to strengthen in terms of numbers since 2008 (see Table 1). Psychology is part of the ESRC North West Doctoral Training Centre (NWDTC), the largest centre in England for social science PG training, with investment of £15 million over the next 5 years. Psychology within the NWDTC has been most successful in studentships awarded compared to all other disciplines, which is evidence of the calibre of students recruited and the quality of training offered: we have 10 applicants for every place and 91% of recruited PGs have a MSc. Our strategy to diversify doctoral funding sources over the period has generated studentships funded by CASE, industry (e.g., GlaxoSmithKline), UK Government departments (e.g. DSTL, CPNI), and charities (e.g. Down Syndrome Education International, Epilepsy Action), in addition to RCUK and two Departmental/University studentships funded annually. We currently host a Marie Curie research training network that trains 8 RS and 3 CRS in neurophysiological, computational and behavioural studies with infants and children (www.eu-act.org/index.html). The dynamism of the RS culture is highlighted by the regular presentation of seminars by RS in Psychology's internal seminar series (50% of talks since 2011), and Lancaster Psychology RS organising and hosting the 28th Annual PsyPAG Postgraduate Student Conference at Lancaster in 2013.

All RS are supported by a supervision team comprising at least two supervisors. A formal 6 monthly review process is in place to identify training needs and facilitate progress. Psychology is part of the Vitae NorthWest Hub that incorporates the UK GRAD and UKHERD programmes, and PGs are supported in attending Vitae researcher development events. The Vitae Researcher Development Framework is incorporated into annual reviews within Psychology. RS undergo regular training needs assessment and are required to undertake at least 10 days generic research

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training per annum covering topics such as project management, thesis preparation, and presentation and transferable skills. This effective support and development of RS is reflected in a 100% completion rate within four years throughout the period. The quality of training is reflected in the excellent outcomes following graduation, e.g., since 2008 more than 25% of our PhD graduates have immediately gone on to lectureship positions. Psychology leverages expertise and facilities across the University with RS in Psychology who have supervisors from Departments of Computing, Management, Marketing, Linguistics, Maths, Biomedical Sciences and History.

Each RS is provided with designated office space with a desktop computer, as well as two dedicated large data analysis laboratories with facilities for 20 RS. Each RS is encouraged to attend international conferences, with an annual research support budget for travel, training and participant payment. The University provides additional awards for travel, and Psychology RS have been successful in obtaining 31 such awards since 2008. For career development, all RS are offered the opportunity to complete the Certificate of Academic Practice, a masters-level qualification for Higher Education teaching, and participate in seminar teaching in preparation for permanent academic positions. Career advice and training is provided to RS in accord with the level of support offered to CRS. RS have transferable skills training explicitly built into their PhD training programmes, and have available tailored psychology careers advice as well as access to a University-level dedicated careers team for training and advice.

d. Income, infrastructure and facilitiesIncome

Income has diversified and increased since 2008. Psychology has received funding from 23 different sources, totalling >£250K per FTE staff member in the REF 2014 period, a 182% increase over the 2008 RAE period. Funding from RCUK has been maintained at consistent levels, with large increases in industry and Government funding sources since 2008.

Infrastructure and facilities

Behavioural testing for infancy research is conducted in a dedicated 365m² £1.1M purpose-built building, comprising 6 observational laboratories, a “moving wall” laboratory for spatial processing research, three laboratories containing child-appropriate eye-trackers (three acquired since 2008), an infant EEG laboratory (est. 2012), a NIRS laboratory (est. 2013), a computational developmental neuroscience laboratory containing 48 integrated CPUs (est. 2011). Since 2008, additional lab space of 390m² has been assigned by the University to house the expansion of laboratory facilities. This increased laboratory space for CRHDL has been assigned to labs appropriate for testing lifespan research, with individual laboratories for adult EEG (est. 2009), TMS and transcranial direct-current stimulation system (tDCS) (est. 2013), neuropharmacological testing (est. 2011), and a sleep lab with polysomnography recording (est. 2012).

Facilities for CCSR comprise twelve general-purpose laboratories, two sound-proofed auditory testing laboratories for cross-modal cognitive research, three investigative interviewing suites (two added since 2008), a multisensory laboratory with integrated sound and movement facilities (est. 2009), a social cognition laboratory with individual and group testing facilities (est. 2013), and a psychometric library containing 175 tests.

Since 2008, the University has invested in equipment in Psychology comprising two EEG systems, a NIRS system, a (tDCS) system, three eye-trackers, sleep recording facilities, computational neuroscience facilities, embodied cognition body position encoding, a virtual reality system, and social cognition testing facilities. Equipment and facilities are low-cost for running and maintenance, ensuring sustainability. In addition, we also invest in an access agreement with MRI facilities at Liverpool University, to ensure regular access for fMRI research.

Psychology's facilities are supported by 2 FTE computing technicians, and 3 FTE equipment technicians with expertise in eye-tracking, neurophysiology, and experimental software. The technicians are encouraged to train in new techniques, and attend regular external and internal courses to ensure their skill sets are tuned to Psychology's research support needs.

e. Collaboration or contribution to the discipline or research base

Psychology's research vitality is underscored by the quantity and reputation of its external collaborations and research networks. Psychology has formal bilateral arrangements with the Universities of Kyoto (Japan), Sunway (Malaysia), and Twente (Netherlands). Each of these arrangements is supported by annual joint research meetings attended by 10 faculty from each institution, resulting in 10 joint publications, 2 research grants, and 3 co-supervised PhD students.

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The Twente link has established an annual joint summer school in forensic psychology attended by 17 PhD students and postdoctoral researchers that is supported by a Socrates agreement. Psychology also has a Socrates agreement with Pavia for facilitating postgraduate research collaborations, resulting in 6 research exchange visits since 2008 and PhD co-supervision. In addition to these institutionalised cooperations, the individual collaborations noted below have all resulted in either co-authorship on refereed publications, investigator status on externally-funded grant applications or consultancy work: 68 overseas university collaborations (including 19 in USA, 8 in Canada, 25 in Europe, 5 in Australia, and 3 in Asia); 62 UK university collaborations; and 20 industry/health partners/charities collaborations, including US Department of Homeland Security, US Transport and Security Administration, American Airlines, NHS NorthWest, Epilepsy Action, and Down Syndrome Education International. Psychology also hosts an EU training network, involving 11 PhD students and collaborations with 8 other universities. Psychology is active in hosting international visitors, and 45 academic visitors have made visits >1 month to Psychology for joint research activities.

At the core of Psychology at Lancaster is enrichment of research through interdisciplinarity. There are 20 research collaborations with other departments at Lancaster, including Mathematics & Statistics, Computing & Communications, Physics, Biomedical & Life Sciences, Linguistics, Economics, Geography, Management Science, Lancaster Institute for Contemporary Arts, Division of Health Research and Lancaster Medical School, each resulting in jointly published papers and/or grant funding. Psychology's research structure into two Centres draws collaborators to the critical mass of psychological research within Psychology from across the University. Psychology's involvement in the multidisciplinary Security at Lancaster and Centre for Ageing Research also provide a fertile environment for collaborative research, and has resulted in recognition as a Centre of Excellence in Cyber Security Research funded by GCHQ and the EPSRC.

In terms of contribution to the discipline, Psychology at Lancaster is highly active nationally and internationally. During the REF period, we have had 3 journal editor positions: including Scientific Studies of Reading (Cain, 2012-present), Legal and Criminological Psychology (Taylor, 2012-present), 3 special issue editorships, including Developmental Neuropsychology (Reid, 2012), Journal of Autism and Developmental Disorders (Allen and Lewis, 2013), 11 associate editor positions: including British Journal of Developmental Psychology (Towse, 2008, Westermann, since 2008), Child Development, Bremner, since 2013), International Journal of Language & Communication Disorders (Cain, 2005-2011), Journal of Research in Reading (Cain, 2005-2010), Negotiation & Conflict Management Research (Taylor, 2009-2012), Quarterly Journal of Experimental Psychology (Ormerod, 2005-2009), PLoS1 (Reid, 2012-2013), Frontiers in Developmental Psychology (Reid, 2011-2013); and 22 journal editorial board positions, including Neuropsychologia (Reid, 2010-2013), Psychological Science (Ormerod, 2009-2011), and Child Development (Lewis, 2007-2013, Reid, 2013).

We have received numerous prizes, honorary positions and fellowships: UKLA/ Wiley-Blackwell Research in Literacy Education Award (Cain, 2008), BPS Cognitive Section annual award (Monaghan, 2013), Fellow of Association for Psychological Sciences (Bremner, 2012), Vice Chair, ESRC Research Grants Board (Bremner, 2008-2010), Vice Chair of the Commissioning Panel, ESRC First Grants Scheme (Bremner, 2009-2010), Member, Steering Group for the RCUK International Benchmarking (Bremner, 2009-2010), Chair, BPS Developmental Psychology Section (Lewis, 2010-2013), Chair, BPS History & Philosophy of Psychology Section (Collins, 2006-2009), Board Member, Jean Piaget Society (Lewis, since 2009), Recorder (HonSec) of Psychology Section of British Science Association (Monaghan, 2009-2012), EPS committee member (Monaghan, 2007-2010), BPS Developmental Section committee (Allen, 2010-2013).

We have enhanced the discipline internationally via invited presentations and organisation of conferences (see Table 1), including the British member Dyslexia Association International Conference (Cain, 2011), The BPS CogDev (Monaghan, Reid, 2013), the Association of Cognitive Analytic Therapy (Lewis, 2008), and the European Association of Psychology and Law (Taylor, 2013). We have organised 19 conferences and 3 workshops, including hosting the EPS (2013), the International Association of Conflict Management (2008, 2009), and the BPS Social section (2013). 13 members of staff have also served on conference programme committees, including SRCD (Bremner, 2012), Cognitive Science Society (Monaghan, 2012-2013), and the International Conference on Cognitive Modeling (Westermann, 2009).