

Environment template (REF5)

<p>Institution: University of Lincoln</p>
<p>Unit of Assessment: 4 – Psychology</p>
<p>a. Overview</p> <p>The unit of assessment (UOA) comprises the School of Psychology, located within the College of Social Science. Staff within the school are organised into four research groups, reflecting areas of current strength and priority areas for development. The four research groups cover a broad spectrum of research across the psychological sciences, ranging from qualitative research in community and social identity to biopsychology and cognitive neuroscience. Each group is led by a Professor, responsible for strategic direction and enabling a supportive and developmental environment within the group. The groups utilise research laboratories housing specialist experimental facilities managed by individual staff members, but accessible to all staff and research students (e.g. The Lincoln Baby Lab; Lincoln Sleep lab; EEG lab; Lincoln Transcranial Doppler Lab). Informal inter-disciplinary research groupings and interaction between research groups are also encouraged.</p> <p>In 2011 the University appointed a Professor (Hodgson) as Research Director to coordinate research strategy and further enhance the research culture within the School. The Research Director reports to the Head of School and chairs the School Research Committee, which includes representatives of all staff groups. These mechanisms have allowed for both leadership and inclusion in the development of research in the School.</p> <p>b. Research strategy</p> <p><i>Key achievements over the assessment period</i></p> <p>The School of Psychology has experienced continued growth and success since its formation in 2001, and the period 2008-2013 has seen a further step-change for psychological research in Lincoln. Significant achievements during the period include:</p> <ul style="list-style-type: none"> • the growth of a vibrant PhD student culture, with 15 completions since 2008 and 17 post-graduate research students currently enrolled; • an increase in the number and proportion of research active staff, and in staff represented in the current submission relative to RAE 2008 (from 7 to 12.60 FTE); • increased external research income (total contracts awarded in the current assessment period total approximately £745,000, compared to £14,000 in RAE 2008). <p>In 2010, staff were reorganised into four research groups, with staff members being free to be part of either single or multiple research groups. Key research themes addressed by the groups are as follows:</p> <ul style="list-style-type: none"> • the <i>Perception Action and Cognition</i> group conducts behavioural, neurobiological and computational research into the mechanisms of mind and behaviour; • the <i>Identity and Community</i> group focuses on qualitative and quantitative research into social-psychological phenomena in context; • the <i>Forensic and Clinical</i> research group is directed towards the assessment, treatment and understanding of abnormal behaviour and cognition within applied domains; • the <i>Evolution and Development</i> group examines how cognitive processes, behaviour and emotion develop in children and evolve in humans and animals. <p><i>Future research strategy</i></p> <p>Key aspects of the School's research strategy for the period 2012-2018 are:</p> <ul style="list-style-type: none"> • to further increase the proportion of academic staff producing research of international quality by investing in and mentoring all academic staff; • to recruit new academic staff at all levels of experience to augment quality and breadth of

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research activity across the four research groups;

- to sustain and expand research activity by increasing research income over the next five years (target total confirmed research income from all sources during the period to exceed £1,000,000 by 2018). The School has won well over than £400,000 of research income in 2013, including £287,000 from the ESRC and £132,000 from the Technology Strategy Board;
- to increase numbers of PhD students over the next five years, rising to an average of one PhD student per staff member by 2018.

Research income generation strategy

The target increase in research income is being achieved through:

- enhancing readiness for responsive mode calls via investment in research infrastructure and maintenance of a broad base of staff expertise in the psychological sciences;
- identifying and prioritising funding calls for early career researchers and new investigators;
- identifying and prioritising funding opportunities with non-academic partner organisations (e.g. Knowledge Transfer Partnerships and applied research projects);
- fostering strong intra and inter institutional academic links, with a view to developing further collaborative research council funding applications during the period.

Post-graduate research student recruitment strategy

Although lacking ESRC doctoral training centre status, the School has adopted a strategy for expanding post-graduate research student numbers comprising:

- provision of full studentship support (based upon research council stipend levels), via School and College level funding, for at least one outstanding PhD candidate per year;
- encouraging applications from self-funding students through provision of a competitive part-time and full-time fee structure;
- providing two graduate teaching fellowship positions to PGR students, to include up to 120 hours a year of paid teaching support;
- providing two technical research assistantships with the school, allowing two recent graduates to register for part-time PhD study while providing technical and computing support for research and education activities across the school;
- provision of fee waivers for staff, enabling graduate level research assistants and other support staff to register for study on a part-time basis;
- seeking direct support from commercial and non-academic partners for studentship funding, with recent examples including PhD studentships supported by the Responsible Gambling Trust and the Ministry of Defence.

Research strategy implementation and development

A key mechanism for the development and implementation of the School's research and impact strategies is the School Research Committee, which meets up to six times per year. Features of the School Research Committee are:

- two representatives from each of the research groups, along with early career researcher and post-graduate research student representatives. The School Research Director acts as chair;
- an annual budget, to be allocated for research travel expenses, conference attendance and small items of research equipment – available to all academic staff via completion of an application form (up to £500 per staff member per year is usually approved by chair's action, with larger requests discussed by the Committee);

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- standing agenda items on research strategy development and implementation, early career researcher support, and post-graduate research student issues;
- the Committee considers staff study leave applications (see below), and also makes recommendations to the Head of School to support publication costs, access charges for research equipment (e.g. MRI scanning), or support for purchase of larger items of equipment and software from School funds, as required by staff and research groups.

Other structures in place to support research include:

- a *study leave* (i.e. sabbatical) scheme, which prioritises research and impact generating activities and specifies an expectation that staff can be considered for study leave once every five years. Detailed applications are considered at the School Research Committee;
- School research seminars (weekly during term time), with invited speakers of international standing reflecting research relevant to one or more of the research groups;
- individual research group meetings (weekly to monthly as required): these give opportunities for staff members, research assistants, research students and visiting researchers to present to special interest groups, host forum discussions, and discuss group strategy and management issues

Interdisciplinary links and institutional support

The School has strong interdisciplinary research links with other units within the University of Lincoln. These include active collaborations with the Lincoln Social Computing Group (School of Computer Science) and the Animal Behaviour and Cognition Research Group (School of Life Sciences). Psychology staff are also members of the Lincoln Institute of Health, which exists to promote research across the University in the domains of applied health research. An example of a developing link is that with the School of Social and Political Sciences, around citizenship and civic and political participation by young people.

The School Research Director and an early career researcher staff member represent the school at the College Research Committee, which is chaired by the College Research Director, who in turn reports to the Pro Vice Chancellor for the College of Social Science. The College of Social Science provides research funding, including seed corn support for larger proposals, for individual research projects (up to £5,000 per project) that show a clear pathway to producing high quality outputs, external research funding, or significant non-academic impact. School of Psychology research projects have received over £57,000 of investment from this source since 2009. The University has also launched a Research Investment Fund (£500,000 in 2013-14, with £37,000 supporting two projects in the School). National and international research funding calls and special initiatives are highlighted through regular funding alert bulletins by the College research support team. The quality of research grant applications is assessed through an internal peer review process, and by the College Research Director and University Research and Enterprise Department. The Research and Enterprise department also offers additional support for developing grant applications and the management and administration of existing awards.

c. People, including:

i. Staffing strategy and staff development

Overview

The School's staffing strategy reflects key elements of the research strategy, through maintenance of a nurturing and inclusive approach to developing staff research whilst making new appointments to enhance the sustainability and vitality of the research environment.

Appointments and promotions

New appointments are made in the context of the existing research groups and evidence for excellence in research activity in candidates. In the period under review, 11 new academic staff have been appointed, including two at Professorial and one at Reader level. Four staff have been promoted from lecturer to senior lecturer level grade, two from Senior Lecturer to Reader level and

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one from Reader to Professor level.

Staff mentoring

The provision of tailored one to one support for academic staff research is a key element of the School's staffing strategy. The School implements a formal Mentoring Scheme overseen by the Mentoring Scheme Coordinator (Dr Gaunt). This is a voluntary system which encourages all staff members to seek out an individual mentor from the available staff. In addition, the School Research Director holds annual one to one meetings with academic staff to discuss individual research programmes, research impact agenda, plans for research funding applications and any challenges to research progress. The Research Director also holds a weekly 'Paper Clinic' session, at which any staff member can seek advice about research publications at various stages of development, from preparation, selection of journal, and comments on draft manuscripts, to responding appropriately to referee comments. These sessions have proved particularly popular and useful for less experienced and early career researchers. Mentoring for research occurs in parallel with and complements the University Academic Development Appraisal, which provides staff with the opportunity to reflect on their research goals and achievements every 12 months.

Support for early career researchers

The School and the University support the Concordat to Support the Career Development of Researchers by recruiting, selecting and retaining researchers with the highest potential to achieve excellence in research. Specific measures introduced to enhance the support for early career researchers (ECRs) include:

- an ECR representative at School Research Committee (rotated every 12 months);
- regular ECR staff group meetings, organised by the ECR representative to discuss relevant issues (e.g. effective implementation of the Concordat);
- a guaranteed lower than average teaching load for ECR lecturers throughout their first two academic years at the University;
- priority is given to ECRs for allocation of internally funded PhD studentships (with the co-supervisor being a more senior and experienced staff member).

At the University level, research road shows, grant writing workshops and effective research training programmes are available, and ECRs (and other staff) are encouraged to attend these events.

Equality and diversity

Diversity and equality are promoted in all aspects of the recruitment and career management of staff members. The School has a high representation of women (59%) and ethnic minority (19%) academic staff. At professorial level, 40% of staff are female. Staff in the School support and participate in the University of Lincoln's Women in Science and Engineering scheme, and the School will apply for an Athena SWAN Bronze Award in 2014. The University also promotes equality and diversity through its Respect Charter and People Strategy, a comprehensive range of policies around employment, equal opportunities, research management and ethics, each with an element designed to facilitate and support research activity among staff and students.

Links between clinical and non-clinical researchers

Clinical academics within the school support the clinical doctoral training programme, as well as being active members of the Forensic and Clinical Psychology research group. Clinical academics report to the Head of School and Research Director in the same way as other academic staff members to discuss research goals and programmes, to identify opportunities for research funding, requirements for resources, equipment and research development needs. The School has also set as a strategic priority integration of clinical and non-clinical academic staff research activity within the school, with one mechanism for this being increased joint supervision of DClinPsy student research projects between clinical and non-clinical staff members.

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There are currently 17 post-graduate research (PGR)/PhD students enrolled within the School, carrying out research spanning the entire range of research group interests (compared with three students registered at the time of the 2008 RAE). The School's research strategy aims to maintain and enhance integration of post-graduate research students into the life of the School. Research students are encouraged to be active members of the research groups, and are required to present their work to other students and staff members in their research group at key stages of their period of study. A post-graduate research student representative sits on the School Research Committee and attends School meetings. All research students are guaranteed £500 per annum of research support costs from School funds, with requests for larger amounts (e.g. to attend international conferences) considered by the Head of School.

A rigorous system of monitoring PGR student progress is in place within the School. Annual progress meetings attended by the student, supervisor, and another academic staff member supplement weekly supervisory meetings to support and monitor PGR progression. An academic staff member acts as PGR director within the School (Dr Guo), to ensure effective implementation and maintenance of PGR support and progress monitoring.

Every research student is a member of the University's Graduate School, which fosters the development of postgraduate research and champions the interests of research students at the University. The Graduate School offers education and career development programmes for all research students.

The School is a partner in a regional multi-agency NHS funded clinical psychology doctoral (DClinPsy) training programme in collaboration with the University of Nottingham. Students have been classified as post-graduate research students since 2012 to reflect the research-intensive nature of the programme. There are currently 22 DClinPsy students enrolled at the University of Lincoln and 17 students completed doctorates in 2012-13. Developing co-supervision of DClinPsy student research projects by clinical and non-clinical staff is prioritised within the School's research strategy.

d. Income, infrastructure and facilities*Research grants awarded*

The assessment period has seen a step change in research grant income, drawn from a broad range of sources. Grants awarded over this period include two significant awards from the ESRC: a large-scale project to carry out a UK-wide standardisation of a language development assessment tool, and a major award to investigate social and biological visual motion perception. Other key grants awarded during the period have included a Shirley Gaston Hughes award from the British Dental Association to investigate decision making in dentists, a Knowledge Transfer Partnership (part supported by the Medical Research Council) to develop computer games to improve functional vision in visually impaired children, and a US National Institute of Child Health funded project to investigate how children and parents interpret dogs' body language.

Infrastructure and facilities

Strategic investment in research infrastructure has continued during the assessment period:

- a fully equipped Sleep Lab was set up in 2011. The Lab is equipped with an Embla N7000 polysomnographic recording system to allow full sleep scoring and a pair of Actiwatch-2 actigraphy devices to allow remote activity monitoring for cognitive neuroscience research into sleep;
- the Lincoln Functional Transcranial Doppler Ultrasound Laboratory was established in 2013, following a grant from Hesse Epilepsy charity to purchase a Doppler Box system for studies of language brain lateralisation via measurement of cerebral blood flow in adults and children;
- the Barbary Macaque Project has received continued investment over the period. Equipment purchases for the field centre include GPS tracking devices, PDAs with Pendragon Forms software for data collection, weather stations, video-cameras, software

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for audio analysis, and digital microphones and speakers for playback experiments;

- an internationally significant range of eye tracking systems. New purchases during the period were: an SR-Research, Eyelink 1000 system, an upgraded Tobii T120 System, and a 120Hz ViSaGe eye tracker and Ober Saccadometer Advance system. In addition, the department has 2 Tobii T60 eye trackers, a 60Hz ViSaGe eye tracker, and a Fourward Systems – Dual Purkinje Image eye tracker.

Further significant items of equipment purchased during the period include a Mirage visuo-motor feedback control system, custom built for the Lincoln Motor Lab by Dr Roger Newport (University of Nottingham); a BIOPAC system for skin conductance and heart rate monitoring; and a 5 year licence for the CANTAB Neuropsychological test battery.

Other facilities available within the School's laboratory suite include: 64-channel and 16-channel ActiveTwo EEG with BrainVision Analyzer, a Medtronic MagPro X100 high performance magnetic stimulator with Zebris guidance system, two ViSaGe visual stimulators, and a High Speed Video Eyetracker Toolbox. The Lincoln Baby Lab also has facilities for preferential looking, eye tracking and habituation research in young children and babies.

e. Collaboration or contribution to the discipline or research base

The School contributes to the wider discipline and research base through a variety of activities, including:

- collaborative links with internal and external research networks;
- maintenance of shared facilities and resources for international research;
- membership of professional bodies and advisory groups;
- review and editorial services for academic journals and grant awarding bodies;
- delivering invited talks and seminars to external organisations.

Collaborative links with internal and external research networks

The School is the hub for a wide array of research activity within the University of Lincoln. Members of the School have meaningful and productive links with the School of Computer Science, the Animal Behaviour and Cognition research group within the School of Life Sciences, and researchers in the School of Health and Social Care via the Lincoln Institute of Health. Regular shared research seminars are held between researchers in the School and the School of Computer Science, with a particular focus on vision science and machine vision. Researchers in the School typically possess wide-ranging networks of national and international collaborators, including, for example, collaborations with the University of Beijing, China (Guo); Padua, Italy (Mather); The Face Research Centre, University of Bournemouth (Hodgson); St Andrews University and University of Delft (O'Hare); Harvard University and Max Plank Institute for Evolutionary Anthropology (Meints); University of Lancaster (Ellis); Bar-Ilan University, Israel (Gaunt); and the Leibniz Institute for Neurobiology (Durrant).

Shared facilities and resources for research:

The School manages an internationally important field site for primate research in Morocco, the Barbary Macaque Project. The site is used by a variety of researchers, including from the University of Roehampton, University of Groningen and Ecole Nationale Forestière d'Ingenieurs, Morocco. It typically hosts nine post-graduate research students per year from Lincoln and other institutions.

The Lincoln Baby Lab (Evolution and Development Group) has developed and supports a comprehensive, purpose-built software package, the Lincoln Infant Lab Package, which enables users to run Intermodal Preferential Looking, Habituation and Preferential Listening studies. The software is available as shareware to researchers and to health care professionals. More than forty Infant Labs are using the software worldwide, among them labs in the UK, Germany, France, Spain, Italy and Mexico, USA, Japan. The Lincoln Baby Lab has also developed a UK adaptation of the MacArthur communicative development inventory (CDI), and supports a database of Lincoln CDI scores for infants and toddlers accessible to researchers in the UK and internationally.

Environment template (REF5)*Membership and affiliations to external organisations:*

Illustrative examples of the range of affiliations and roles held with external organisations are:

- Visiting Professor at University of Sussex, UK and University of Padua, Italy (Mather);
- Associate Researcher at the University of Cambridge, Department of Social Sciences (Gaunt);
- Full Fellow of the British Psychological Society and local organiser for the 2015 Experimental Psychological Society meeting to be held in Lincoln (Hodgson);
- Elected member of Wolfson College, Oxford (Meints);
- Chair of the Sex Offender Research and Practice Group and Sexual Interest Assessment Forum, and Full Member of The Association for the Treatment of Sexual Abusers (Hogue);
- Council member of the Primate Society of Great Britain (Majolo);
- Member of the Department of Health Expert Group concerned with the development of Pregnancy Birth & Beyond parenting programme (Gross).

Review and editorial services for academic journals and grant awarding bodies

Staff are encouraged and given practical support (e.g. administrative and teaching cover support) to provide editorial services for academic journals and book series. Current editorial associations of staff members within the School are:

- Action editor for *Perception and iPerception* and a member of the editorial Board of the *Proceedings of the Royal Society Series B* (Mather);
- Member of the editorial board for *Frontiers of Developmental Science* (Meints);
- Member of the editorial Board for *Brain Research* and member of the editorial board for *Behavioural Sciences* (Hodgson);
- Member of the editorial board for *Journal of Anthropological Sciences* (Majolo);
- Editor for *Explorations in Language and Space* (van der Zee).

Members of the School have also reviewed articles for a wide array of academic journals during the assessment period, including:

Animal Behaviour; Attention, Perception and Psychophysics; Behavioral Ecology; Biology Letters; Brain and Cognition; Brain Research; British Journal of Developmental Psychology; Cerebral Cortex; Connection Science; Developmental Science; European Journal of Social Psychology; Experimental Brain Research; Hormones and Behavior; Journal of Cognitive Neuroscience; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Social Psychology; Journal of Forensic Psychiatry and Psychology; Journal of Infant and Child Development; Journal of Neuroscience; Journal of Vision; NeuroImage; Perception; Psychology, Crime and Law; Proceedings of the Royal Society of London B; Sexual Abuse; Schizophrenia Research; Vision Research; Quarterly Journal of Experimental Psychology.

School staff members have reviewed grant submissions for a range of funding bodies including: the ESRC, MRC, Leverhulme Trust, Wellcome Trust, and National Institute for Health Research.

Invited talks, presentations and public lectures

Staff members have been invited to give a wide range of invited talks to a variety of groups, including research centres and public forums. Illustrative examples are:

Manchester Literary and Philosophical Society, Public Lecture, May 2012: 'Music in Mind' (Durrant); Oliver Zangwill Seminar University of Cambridge, November 2008 (Hodgson); University of Edinburgh, School of Psychology Research Seminar, 2011 (Majolo); Royal College of Art Seminar, London 2011 (Mather).