

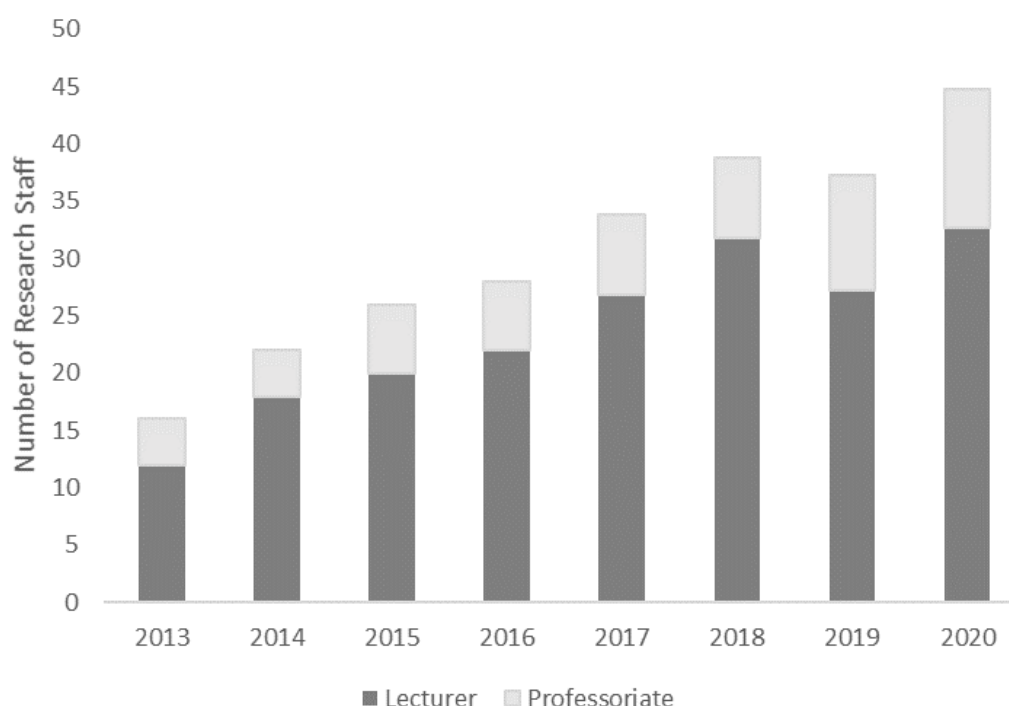
Institution: Bournemouth University

Unit of Assessment: 4 - Psychology, Psychiatry and Neuroscience

1. Unit context and structure, research and impact strategy**Unit Context**

UoA4 is primarily made up of researchers from the Department of Psychology (41.7FTE out of 43.7FTE). Our research aim is to conduct world-leading research in psychology, disseminate this widely, inspire a new generation of researchers through a challenging and stimulating environment, and use this research to inform professional practice. To support this aim, Bournemouth University has invested heavily in the Department (staff and infrastructure, see Figures 1.1 and 1.2) since it was created in 2010:

- Over £4.5 million of investment in laboratory equipment (Section 3);
- We have appointed 32 highly-talented early- and mid-career researchers from world-leading research laboratories and two professors to help lead and mentor them (Section 2);
 - 13FTE were submitted to REF2014, compared to 43.7FTE (46 current staff and 3 former staff members) in the current submission;
- Organised our staff around three key research themes (Figure 1.3), with professorial leadership for each.

**Figure 1.1. Staff investment since REF2014**

Coupled with our research strategy, this investment has led to:

- a considerable growth in the number of (world-leading) publications being produced within the Department across the REF period:
 - 652 unique outputs (representing 13.04 per FTE) compared to 67 (and 5.15 per FTE staff in REF2014);
 - Viewed 21,187 compared to 2,424 in REF2014 on Scopus;
 - Cited over 8,303 times according to SciVal leading to a H5-index of 18 for the Department compared to 1,691 in REF2014;
 - Increased industry collaborations from 5% of outputs in REF2014 to 22% in REF2021;

- 15.8% of publications in the top 10% most cited journals worldwide and 17.7% of outputs in the top 10% of journals (from CiteScore);
- a large increase in the value of bids won (over £1.5 million won for REF2021 compared to £181k in REF2014)
 - Equating to £35k won per FTE in REF2021 compared to £20k won per submitted FTE in REF2014;
- an increase in PhD completion rate from 1 in REF2014 to 31.33 for REF2021;
- an increase in outreach and impact activities undertaken by Departmental members.

These successes occur in a context where almost a third (30.43%) of staff in the unit have accepted staff circumstances limiting their time spent on research over the REF period (e.g. 16 staff are Early Career Researchers).

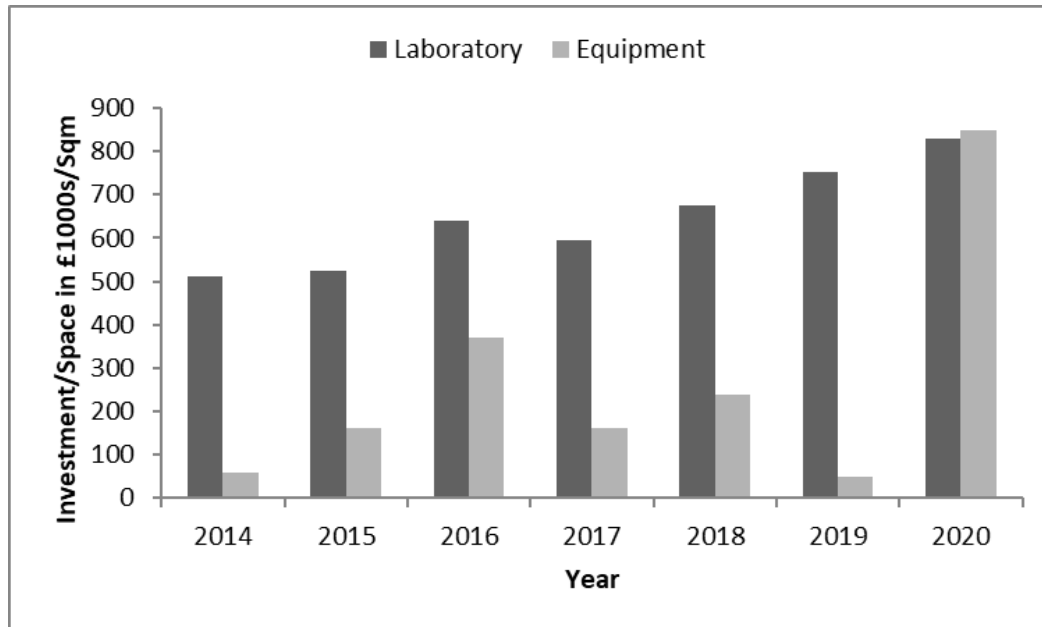


Figure 1.2. Investment in Departmental space, and equipment

Research Strategy

Following REF2014, the Department of Psychology has refined its research strategy, building on our successes. In REF2014, we created two Research Centres (Health and Wellbeing; Cognition and Cognitive Neuroscience). Through investment (Section 3) and strategic recruitment (Section 2), we refined our focus and developed three Research Themes (Figure 1.3), whilst also enhancing our interdisciplinary collaborations (with UoA3, UoA11). This refinement provides a focus of where we need to invest resources. Our supportive strategy (see below), has meant that every member of the Department has been supported in their research. This ensures the Department has remained a rewarding environment for staff and students to express themselves, by being: collegiate, considerate, egalitarian, respectful, and transparent in its processes and procedures. The Department explicitly values diversity, openness, and fairness in all aspects of our work, leading to our Athena Swan Bronze Award (achieved in 2018).

Our Research Strategy was devised by our **Research Leadership Group** (consisting of the Head of Department, Deputy Head of Department (Research), Impact Champion, and Output Champion). This group works closely with the **Research Committee** (consisting of all the Research Group leaders, Athena Swan Lead) to identify training, development, and funding needs, plan investment and targeted recruitment. The **Departmental Grants Panel** help improve the quality of grants through mentorship and internal peer-review. Our Research Strategy's aim leads to the following objectives:

- Build on the existing strengths of the Department in areas of research that are at the forefront of human understanding and are novel in the UK context;
- Recruit staff with promising track records and burgeoning research profiles, to improve our areas of internationally-excellent research;
- Develop existing staff by providing appropriate mentorship, training, and professional development opportunities;
- Provide all researchers with access to world-leading specialist research equipment, appropriate levels of financial and technical support, and appropriate laboratory management, in an egalitarian manner;
- Provide academic leadership, interdisciplinary collaboration, support within and across research groups, including dedicated mentoring and support mechanisms for research career development;
- Develop strong collaborations with local organisations (such as Dorset NHS Trust and Dorset police) based on the principles of sharing knowledge and expertise in order to bring maximum impact to our research;
- Develop a postgraduate research culture that emboldens postgraduate researchers to strive for excellence within their disciplines;
- To ensure the Department's research can meet current international, national and institutional research priorities.

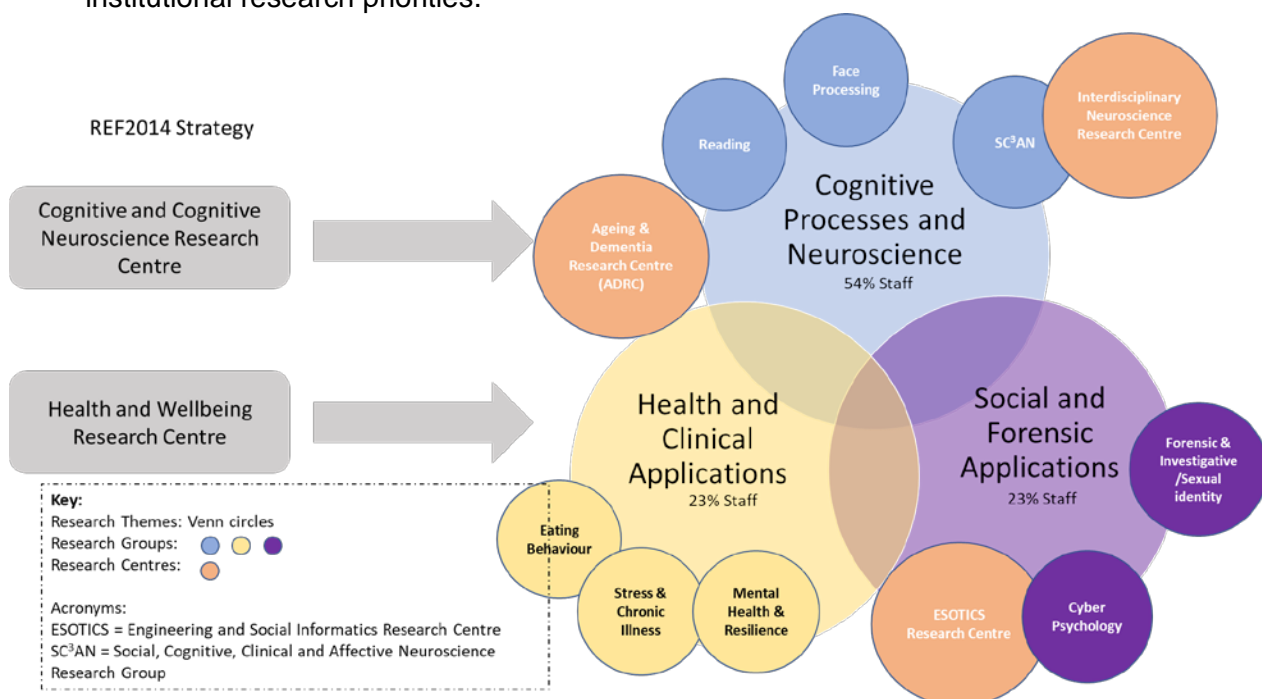


Figure 1.3. The evolution of Research Centres (REF2014) to Research Themes and Groups to better foster collaborations and become niche centres for excellence

Figure 1.3. Highlights our three Research Themes, each led by the professoriate. Within each Theme, there are distinct Research Groups that are tasked with contributing to the research environment by: supporting and mentoring staff, development of collaborations, enhancing communication about research (internally and externally), developing international links and collaborations, and provide a focus for external bids. They hold regular meetings to promote research to their group members, discuss opportunities for funding, run journal clubs and “brown bag” presentations, run training events, and provide a critical eye on colleagues’ work. These groups actively encourage postgraduate research student involvement and engagement, ensuring that the research community is as active as possible.

The **Health and Clinical Applications** Theme aims to understand the mechanisms underlying human health and well-being and to improve lives, society, and economic strength (**Appleton,**

Bolderston, Collard, Greville-Harris, May, Mayers, Muir, McDougall, Nyman, Panourgia, Thomas, Turner-Cobb). Such work has direct links to national and international research priorities, specifically to: UKRI research priorities in technology touching life and the digital economy; UN Sustainability Development Goals, particularly in health and wellbeing; and the UK's industrial strategy aimed at improving lives, productivity, and healthy ageing. This is achieved through collaboration with health and wellbeing services (e.g. NHS, Dorset Health, and Public Health Dorset). This has led to several significant research outputs (including Appleton et al.'s 2015 article on the use of Omega-3 in depression, cited 90 times), grants (**Nyman's** NIHR Career Development Fellowship), and impact cases (**Mayer's** impact case on paternal perinatal mental health).

The **Social and Forensic Applications** Theme aims to improve digital health and wellbeing, combat problematic online gambling, improve online safety and security, develop strategies to identify and counter fake news (**Arden-Close, Hambidge, Hodge, McAlaney, Taylor, Wignall**), and improve police practices in investigative forensic psychology (**Attard-Johnson, Cole, Draycott, Huang**). Through collaborations with and significant investment from the US Army, MoD, Dorset Police, the National Crime Agency, Wiltshire Police, Crown Prosecution Service, Charities (including STARS, Women Against Rape), Sexual Assault Referral Centre Bournemouth, the Centre for Research and Evidence on Security Threats, the [International Centre for Responsible Gaming](#) and [GambleAware](#). This has led to the founding of the Social and Behavioural Science for the annual Cyber Security event (for academics, practitioners, industry and intelligence agencies) and impact cases (**McAlaney's** impact case study on gambling).

As part of the **Cognitive Processes and Neuroscience Theme**, the Reading Group (**Angele, Kirkby, Meso, Slattery, Vasilev**) Eyetracking@BU is an internationally recognised centre of excellence for eye tracking research. BU's investment in both state-of-the-art eye tracking equipment (Section 3) and academic expertise has led to significant investment from Microsoft, including funds for two Post-doctoral researchers. The Face Processing Group (**Bate, Estudillo, Hills, Liu, Mestry, Portch, Yankouskaya**) is a world-leading group that develop impact to help those with face recognition disorders and to enhance security practices for recognising and matching unfamiliar faces. This has led to key impact, including training for the police, identifying super-recognisers and getting the NHS to recognise prosopagnosia, in addition to two British Academy Fellowships. The Social, Cognitive, Clinical and Affective Neurosciences group (**Arabacı, Balaguer-Ballester, Burianová, Elsley, Gregory, Gosling, He, Johnson, Kilintari, Marstaller, Moseley, Parris, Renshaw-Vuillier, Seiss, Shanker, Vagnoni, von Bastian, Weiner**) investigate cognitive functioning (cognitive control, visual perception, and attention) of the brain in various social contexts and in various clinical populations. This work has been supported by significant investment from the University (Section 3) and grant awards (such as **Shanker's** Global Research Challenge Fund bid) and has led to several highly rated research outputs including our most cited article in the UoA (Wolbers & Wiener, 2014, cited 93 times) on the neural mechanisms supporting spatial navigation.

Central University support for our research stems from the University's Strategic Investment Areas (Medical Science and Assistive Technology). Members of the Department are on the Steering Groups for these and the Department's research is at the heart of the overall narrative of research strength for the University in medical science and healthy ageing. Our work in tackling malnutrition in older people (**Appleton**), spatial disorientation in ageing (**Wiener**), and using Tai Chi to help people with dementia (**Nyman**), has been used as exemplar research projects to help people live better, healthier, and age well. We collaborate with Bournemouth Christchurch and Poole (BCP) Council in their ambitions to help local citizens live "fulfilled lives", with joint research projects and funded PhD studentships. In assistive technology, UoA4 researchers have created apps to promote healthier living (reduce gambling, **Arden-Close**), cybersecurity (**McAlaney**) and developed tools to help protect the vulnerable and empower ethical reporting in the case of sexual assault (**Hills, Cole**) and improving diagnoses of relatively unknown illnesses (**Bate's** impact case study). Dedicated Research Development and Support

officers also support our research. Members of the UoA have accessed institutional resources such as the Grants Academy Small Grant.

Collaboration and integration within and across research groups

We place strong emphasis on coherence and communication not only within Research Groups, but across the entire Department. Staff and PGRs can be associate members of other research groups in addition to their core group, fostering collaboration across areas of expertise.

Research Group leaders meet regularly as the Research Committee. Information is therefore shared upward, downward, and horizontally to ensure that communication is maintained. During term time, there is also a weekly research seminar series aimed at staff and PGR development. The seminar speakers are distributed across the research groups with group members selecting speakers by consensus. Finally, there are training sessions organised at a Departmental level for staff and postgraduate research students. The Department publishes a monthly newsletter that highlights awards and prizes, successful grant applications, major publications, public engagement activities and media coverage of research. Our emphasis on collaboration has led to 10.1% of our outputs being cross-research group collaborations. To further enhance internal collaborations, the Department hosts an annual **Research Away Day**. This event provides the opportunity and space for staff to talk about their research and develop collaborations with other members of the Department. Critically, space is created in the timetable to ensure that this event leaves people free from all other duties to concentrate on research and research planning for the future.

Interdisciplinary research

BU and our UoA have a strong focus on interdisciplinary research and collaboration reflecting our long-term strategy to develop interdisciplinary research excellence in fields where we are world-leading. There are three established interdisciplinary research groups at University level that are (co-)hosted by the Department. These are: the **Ageing and Dementia Research Centre** (ADRC, co-run by **Wiener**, collaborating with UoA3, Public Health), **Engineering and Social Informatics** (ESOTRICS, run by **McAlaney**, collaborating with UoA11, Computing, and UoA12, Engineering, with further inputs from areas such as Marketing and Law), and the **Interdisciplinary Neuroscience Research Centre** (INRC, run by **Balaguer-Ballester**, collaborating with UoA34, Business and Management, and UoA3). These groups hold events to foster interdisciplinary collaborations, bringing in researchers from across the University to discuss funding and research opportunities. These collaborations have led to several Impact Case Studies across UoA4 and UoA11. This research group fosters PGRs and ECRs through regular meetings and feedback sessions on draft conference papers.

Our Research Groups are inclusive and attended by people from any Department and external organisation. Furthermore, the conferences that are organised by members of the Department invariably involve multidisciplinary roundtable discussions. For example, criminologists, lawyers, psychologists, police officers, and social workers met to discuss how best to improve forensic interviewing at a 2018 conference on cross-cultural conversations on sexual violence and forensic interviewing.

The University runs interdisciplinary research meetings and workshops organised by our Research Development and Support office. These meetings are an opportunity to showcase research and search for opportunities to collaborate. An additional strategy is run by Faculty Deputy Heads of Department (Research) having monthly meetings in which they discuss research issues and opportunities with each other. Departmental and University research funds are also preferentially directed to multidisciplinary research teams, especially those in which professional practice partners are involved. One of these funds, The **Fusion Investment Fund**, supported members of the UoA to the amount of £126,275 over the REF period.

We share some research laboratories due to multidisciplinary courses- specifically, laboratories associated with healthy eating and eating behaviour are shared with Nutrition and Hospitality.

This encourages researchers to meet to discuss research. Moreover, we had a joint post (**Cole**) who worked in both the Department of Psychology and in the Department of Life and Environmental Studies. The purpose of this was to facilitate collaboration between forensic scientists and the Department of Psychology. This has led to the development of a core forensic research team that is made up of members from the Departments of Psychology, Life and Environmental Studies, Health and Social Sciences and Law. More recently, we have set up posts with industry collaborations, with two posts set up with the NHS (**Draycott, May**) and one practicing forensic psychologist.

UoA4 staff supervise doctoral students in other UoAs including two EngD students in the Centre for Digital Entertainment (with other supervisors coming from UoA11), five PhD students jointly supervised with colleagues from UoA3, and five PhD students, jointly supervised by members of the Department of Psychology and Department of Computing through the ESOTICS Centre, who have either completed their PhDs or are in the process of doing so.

Open Science and Research Integrity

The Department places a strong emphasis on Open Research feeding into extensive training sessions that have been run within the Department on Open Science. Staff are actively encouraged to sign up to the Open Science Framework and commit to making their work (materials and data) freely available. Indeed, the local network lead at BU for the UK Reproducibility Network (UKRN) is based in the Department (**Johnson**). Moreover, the very first letter published by the HoD was on Open Access to stimulus materials (2005: *Psychologist*) due to a difficulty in replicating findings. Staff are actively encouraged to submit pre-registered reports. Bournemouth University is an Institutional member of www.ClinicalTrials.gov, an international resource for pre-registering clinical trials and posting research results.

Our emphasis on Open Research is supported through an Open Access fund and online repositories. All staff can request one article per year to be made Gold Open Access. The only pre-requisites for this are that the paper would be eligible to be submitted as an output to REF2021. In addition to the Gold Open Access Fund, staff must submit the accepted version of a manuscript to our own store of research articles to achieve Green Open Access. All outputs are thus available via BURO – the University's online repository, with 86.8% available online. This provides a secure and open access home for data emanating from BU's research projects. This was setup to fulfil funder mandates for Open Access but is promoted and available to any member of staff who wishes to use it to make their data available to other researchers. 33% of deposits in BORDaR (Bournemouth Online Research Data Repository) come from UoA4.

All research in the Department is approved by the University Research Ethics Committee. Three members of the Department (**Appleton, Thomas, Wignall**) have sat on the University Research Ethics Committee since the Department's inception. Researchers also engage in replication studies regularly (e.g. **Weiner**).

Impact Strategy

At the core of our Research Strategy is the engagement with professional practice. Our impact-related activities are all research-led, long-term, and sustainable at national and international levels and led by our Impact Champion (**Bate**) and deputy (**Mestry**). The Impact Champion sits on the Research Committee and the Research Strategy Group. Further, **Bate** is the Chair of the University's Impact Steering Group. While ensuring that impact is embedded within most research in the Department, their role is to: identify projects that have significant potential for impact, ensure that the researchers involved engage in impact-related activities (including collecting appropriate baseline data), and support the development of Case Studies. Our impact diversity and Case Studies reflect the embeddedness of our impact strategy and our wide-ranging research activity. Crucially, our Impact Strategy has been devised to produce sustained and long-term impact far beyond REF2021 whilst acknowledging the impact of a large number of ECRs in our UoA. Specifically, the Department's Impact Strategy is to:

- Develop more collaborative projects with external organisations. This not only refers to developing more projects with existing partners, but also finding more partners. The aim is then to ensure that publications result from these collaborations and that impact is achieved through changes to the practice at these organisations;
- Identify long-term impactful projects and ensure that there are sustainable teams working on these projects;
- Invest in impactful projects, both in terms of financial and staffing support. This also includes further investment in public engagement (including stakeholder meetings and creation of steering groups);
- Increase and improve our campaigning at governmental levels. This will include continued engagement with charities;
- Continue to have annual events with Dorset Healthcare NHS Trust and Dorset Police, with more frequent Sandpit events.

The Department has two main approaches to enable impact. The first stems from natural extensions from research projects in which staff are engaging. This is especially evident in the industry collaborations. Secondly, we engage in advocacy research, in which we set out to evaluate current practice and subsequently work to improve it. These approaches involve extensive involvement and input from relevant beneficiaries including: charities, service users, government, and patient groups. During the assessment period, four main areas of impact were:

- **Informing and evaluating government policy and police practice** (Beneficiaries: political decision makers and the police). Through existing collaborations, we engage in projects directly exploring and evaluating police practice. This can take two forms: 1) organisations (e.g. the police) bring a problem to us and we devise projects to assess it; 2) we identify an area of concern (e.g. responding to urgent calls from the Home Office) and conduct research to change policy and/or practice. In the first instance, we run events where key members of the local police forces (including leads for evidence-based policing) come to the University to discuss problem areas. They pitch ideas for projects to be run, and we allocate a researcher and a student to conduct a project to solve this problem. This collaborative project then results in changes to police practice. An area where this has occurred related to how information has been collected and stored including police interview techniques (**Cole, Huang**). In the second instance, researchers identify a societal area of concern and conduct research. The work can be introduced to the police through annual roundtable discussions aimed to promote awareness of potential solutions to these problems, resulting in changes to police practice and improvements (such as peer-reviewing of BIA reports, **Cole**). Our research is also funded directly by calls to address urgent concerns such as the Home Office call to improve identification of threat in crowds following terrorist attacks. Materials are developed and evaluated to train the public, venue staff, and security to be better at spotting and reporting threats in their environment based on underpinning research from cognitive psychology. Results and outputs are then disseminated directly to stakeholders at events organised by the funders (**Mestry**). Another key aspect is active campaigning with local and national politicians on areas of concern (**Mayers**). These campaigns are designed to raise awareness of issues and suggest policy changes to alter and improve society based on underpinning research. Areas have included mental health awareness, alternative forms of treatment, and online abuse.
- **Links with industry** (Beneficiaries: software developers, other industrial partners). UoA4 has many collaborative links with local and international industry. These include links with: Microsoft, Unilever, Mondelez, Arla Foods, Bonduelle, PepsiCo, International Sweeteners Association, Dorset Cyber Alliance (whose board consists of senior representatives from Dorset Police, Borough of Poole Council, Bournemouth Council, Electus [Recruitment], LiMETOOLS [eLearning], BU Cyber Security Unit, LV, Dorset Growth Hub, Barclays, Siemens, HSBC, Sunseeker and ESET [Technology]). Through existing contacts with industry (**Slattery**), research has been conducted that has direct impact on the design of software. Based on the outcomes of one of our research projects (**McAlaney**), a gambling operator active within the UK has amended their practices on how to track and intervene with players who are exhibiting problematic gambling

behaviour. One of our staff (**Arden-Close**) presented to a national bank about what they can do to help problem gamblers. Other approaches to impact involving industry include open discussions with local business regarding their needs and engaging in projects to satisfy these needs. This has led to the development of appropriate courses in addition to research projects in human computer interaction (**McDougall**) and cyberpsychology (**McAlaney**). These conversations take place due to connections developed by the University's business manager. Our industry collaborations are shown in Figure 1.4.

- **Joint initiatives in clinical, educational, and psychosocial contexts** (Beneficiaries: Professionals in healthcare and education; individuals and families affected by clinical conditions). We run many initiatives aimed at translating and applying our research to real-world contexts and concerns. These initiatives involve numerous charities, groups affected by specific conditions (e.g., autism, prosopagnosia), health professionals (e.g., those involved in digital healthcare or communicating genetic results), and educational practitioners (universities). Annual 'meet and greet' events are held between Dorset Healthcare and the Department of Psychology. These events aim to bring together members of both organisations to discuss research projects that can be jointly run. Sandpit events are also run where interested parties investigating particular areas meet and discuss specific projects, with the aim of producing grant projects. These events are hosted by the **Department's NHS liaison officer**, who is also a clinician in the NHS (**Bolderston**). The Department also has connections with Primary schools, Secondary schools and Sixth form Colleges (**Hodge, Panourgia**). Further initiatives are run, led by staff in the Department (**Cole, Hills, McAlaney**), to educate the public surrounding issues of misogyny and acquaintance rape. This research team have evaluated several national and international campaigns with the aim to identify the core features of successful behaviour change programmes to devise those that work. Through roundtable discussions with stakeholders (student support officers, Universities UK and national charities), campaign targets are identified and investigated.
- **Public understanding of Science** (Beneficiaries: General public). Members of the Department regularly feature in national and international media. Since 2014, research from the Department has featured in approximately 230 print and online media publications, and in television and radio news programmes such as The One Show (**Bate**), ITV Meridian News and Good Morning Britain (**Mayers**), BBC 1 South Today (**Nyman**), Wave 101 (**Hodge**), Trust Me I'm A Doctor (**Johnson**). Staff members also advise and contribute to documentaries and films concerning Autism and mental health issues, such as Fixers (**Moseley, Mayers**). Furthermore, staff members lead national and international public engagement with research events, aimed to promote science and encourage a two way discussion with the public through University organised events including: the Festival of Learning, the Global Festival of Learning, public lecture days and supporting external events such as: Pint of Science, Soapbox Science, ESRC Festival of Social Science, The British Science Festival, I'm a Scientist Get Me Out of Here, Probus and Café Scientifique. **Bate** was selected to deliver the Margaret Mead Award Lecture for Social Sciences at the British Science Festival 2018. **Turner-Cobb** gave an invited talk at London's Royal Institution discussion event 'The Science of Stress' in October 2016. Holding stakeholder engagement at the core of research development, the ADRC had an advisory panel with care-home managers, and other stakeholders that they met during the time of specific research projects. As mentioned, the Social and Forensic Psychology research cluster also have a steering group of relevant stakeholders.

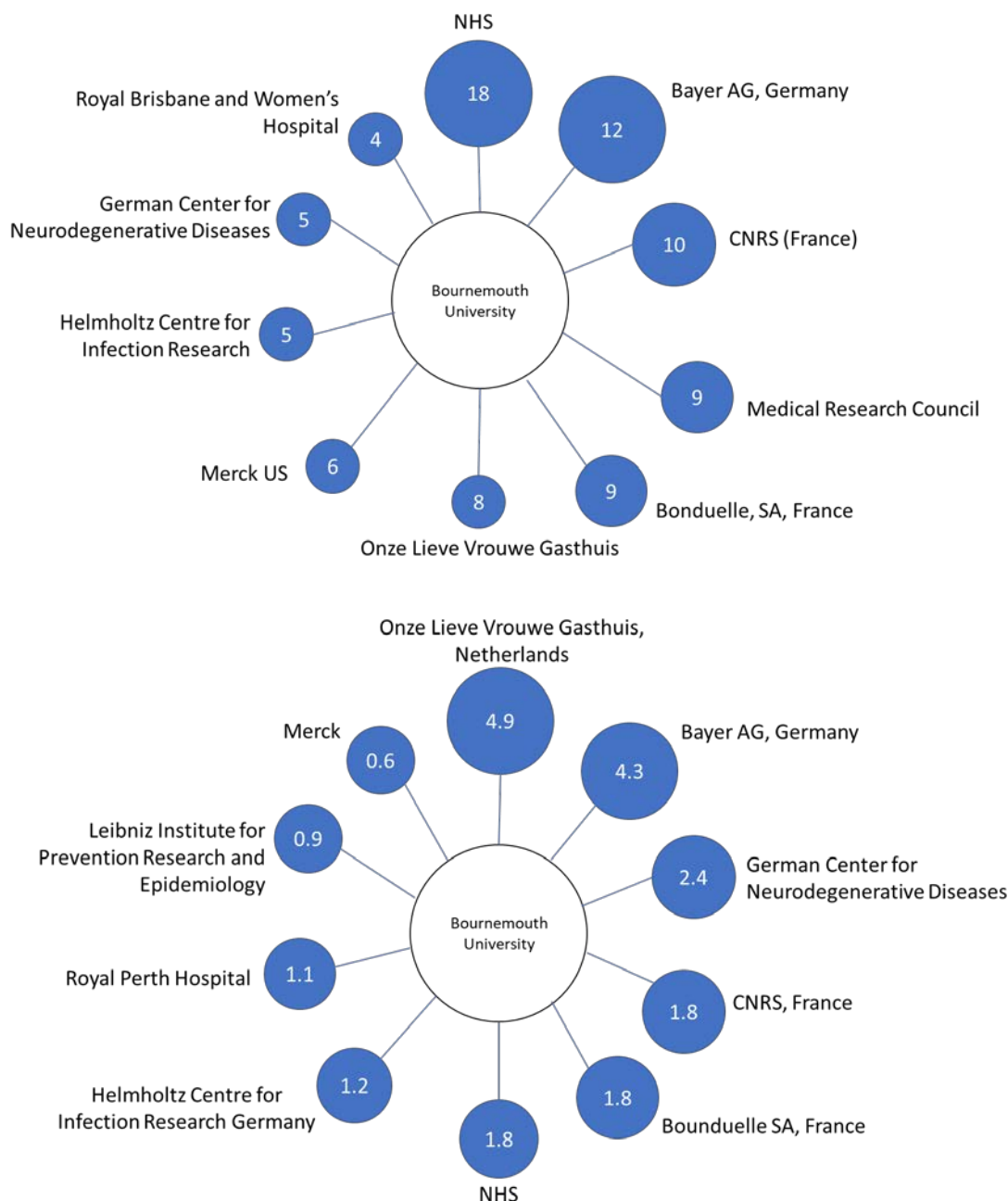


Figure 1.4. Network maps of UoA4's top industry collaborations by i) highest number of outputs as indexed in Scopus. ii) strength of collaborations using field-weighted citation impact (FWCI). SciVal® database, Elsevier B.V., <http://www.scival.com> (downloaded on 15/01/21)

The Department has a dedicated budget for impact-related activities (approximately £9k per annum). This can be used for funding for meetings with policy makers, public engagement activities and seed funding for applied/industry-linked projects etc. The University has a competitive scheme to support enhancing work with charities entitled the **Charity Impact Acceleration Fund**, worth £7k per project. This fund is designed to support enhancing work with charities. UoA4 members have received £15,307 worth of support over the REF period.

Not only satisfying the University's ambition of bringing together research, professional practice, and teaching, but also core components of impact, the Department has devised **collaborative projects** as an option for final year and MSc projects. In these, problems that are faced by local and national organisations (including the NHS, the police, charities, and local companies), are posed and projects are devised from these. Academic staff are allocated to work on these

projects alongside students to solve the problem of the organisation. This approach ensures sustainable and continuous impact.

The Faculty also appointed a full-time **Impact Officer** in 2018 (0.2 FTE for UoA4) who is embedded in our most impact-relevant research. The Impact Officer establishes and facilitates links with beneficiaries outside academia, to support new impact-related initiatives, to communicate our research to third parties, and to assist all staff members (in particular ECRs) in the development of impact strategies for new research projects. The Impact Officer also supports staff recording impact-related activities on the University's online **Impact Tracker**. In addition to the Impact Officer, we had an **Impact Postdoctoral Research Assistant** whose role is to support research projects associated with impact from 2018-2020. They support researchers (especially ECRs) to develop impact-related projects, collect data, and support the dissemination of impact work for this and the next REF period.

The Department also supports impact through awarding internally-funded **PhD studentships** to impact-related projects. These projects directly-relate to the Impact Case Studies submitted. The projects were identified as being those with high potential for impact. The PhD students have conducted projects in these areas and have contributed to the development of impact. Finally, the PhD research (and MSc) training programme includes components related to impact generation and translational research. In addition, impact is a key criterion when considering applications for promotion. BU places equal weight on Impact and Outputs for promotion and workload allocation.

These strategies will lead to the Department having sustained, long-term impact with core partners. Furthermore, these strategies will lead to wider and larger impact, by changing government policy. Finally, the plan is to ensure that the Department has eight 3*/4* Impact Case studies for REF2028. An example of the intent to support global impact stems from the **Global Challenges Research Fund**: From this £72k has been awarded to projects in which members of the UoA were key collaborators. The Departmental strategy was to invest in Impact. Case studies were selected from work that had been conducted within the Department. Research involving impact was funded through the UoA4 impact budget, the Charity Impact Acceleration Fund and Research Impact Fund (£6,143.50 awarded to UoA4) and four impact-funded PhD studentships. Our Impact Case Studies represent examples at the forefront of development, and stem from different research groupings, highlighting how research is embedded across the Department. One Impact Case Study (from the **Face Processing** group) is about raising public awareness of prosopagnosia. One Impact Case Study (from **Health and Clinical Applications** group) was designed to promote better consideration and treatment for paternal perinatal mental health. One Impact Case Study (from the **Cyberpsychology** group) concerns the psychology of cybersecurity, specifically to change behaviour towards cybersecurity within organisations and to understand why people become victims of online scams and, therefore, how to reduce people being affected by them and is to be submitted to UoA11. Another example from **Cyberpsychology** stems from work with GambleAware and ways to reduce online gambling in collaboration with the Computing Department. One Impact Case Study study (from the **Ageing and Dementia Research Centre**) is concerned with citizen science concerning spatial disorientation in navigation.

2. People

Staffing strategy and staff development

We have made 34 new appointments to UoA4 (2 at professorial level; 1 at Grade 9; 5 at Grade 8; and 26 at Grade 7) recruited to our research strengths in reading (5 appointments), face recognition (with 5 appointments), neuroscience (10 appointments), health psychology (7 appointments), and cyber psychology and forensic psychology (7 appointments). During the same time, we had 8 staff departures (4 through retirement). This has created a vibrant and enthusiastic ECR community. We have research that we have built up using strategic appointments. Our staffing strategy is based on the following principles:

- To recruit the best quality researchers with a **proven track record** or significant **potential**; We establish this by asking for research plans during the recruitment cycle and ensuring it demonstrates an upward trajectory in publishing, innovative research ideas with clearly defined plans for developing their own research, and expertise in novel and exciting research methodologies;
- For each appointment, we ensured that they would be **building on strengths** within the Department and complement our research strategy: Research Group leaders are involved in all new staff shortlisting, to ensure that new recruits build on existing success and will be able to collaborate with existing members of the Department and wider University. Further, it is a question asked during the interview process;
- To recruit industry-embedded researchers; we actively seek part-time appointments for staff who have contracts with the NHS, Police, or other relevant local industry. This has allowed us to appoint four clinical researchers (**Draycott, Bolderston, Greville-Harris, May**). Each of these holds a full or honorary contract with the NHS to enhance collaborative work;
- To enable **flexible working** as a priority, as part of our EDI agenda (see below); we actively encourage researchers to have part-time or flexible working contracts as they require and change these as required: six staff have chosen to reduce their hours over the census period and one chose to increase their hours. Two further staff work compressed weeks (full hours in four days) to accommodate childcare;
- To enable research leave, career breaks, and carer/maternity leave, we have appointed staff on fixed-term contracts with a conversion of 7/8 onto established contracts including through staff being placed on a redeployment list by HR. We invest in and support fixed-term staff in the same way as established staff to ensure consistent and fair long-term investment in staff.

Recruitment and selection are guided by the University's official procedures. Further, our interview panels are fully gender-balanced and have a balance of professorial and ECR on them. Once arrived, we ensure that we develop new staff by allocating them a research mentor (this is typically allocated to them by the Lead of their chosen Research Group). Because of having 16 ECRs, we invest heavily in their development such that they can become leaders within the Department quickly. The staff member is immediately fully integrated into existing research groups and laboratories. All new staff have meetings with the Deputy Head of Department (Research Lead) and Head of Department to help them integrate. New staff are mentored, trained in equipment so that there are no delays in setting up research.

Mentors are available to all staff (i.e., those applying for promotion, those in a new leadership role, those taking a career break): mentorship and coaching is provided both within the Department and external to it, guided by our mentor co-ordinator (**Burianová**). Mentorship is designed to help staff achieve the most out of their work and enable them to get all the advice they need to advance their career. Mentors meet with their mentees at least once a month, where research-related strategies and goals are discussed and agreed, plus problems and obstacles to career and research development are identified. The mentor co-ordinator holds a group meeting with new staff on a termly basis to provide support, especially ECRs (e.g., setting up and managing research groups, supervision of PhD students, publication strategies, balancing teaching and research). The group also functions as a workshop for honing grant writing skills.

Given our extensive growth over the REF period, we have 16 ECRs (13 female). We have four main sources of additional support for ECRs:

- Each ECR is allocated a specific mentor for their research career;
- They have a reduction of their teaching/admin workload by 10%;
- Any teaching training they have to accomplish is taken out of their teaching allocation;
- ECRs can apply for ACORN funding to support their research - £13,386 has supported 3 ECRs in UoA4.

The Department has an extensive annual (and informal bi-annual) appraisal system. The appraisal is designed to be an informal discussion about the appraisee's progress and their personal targets for the year. The appraisal is an opportunity to discuss the potential for promotion, career progression and identification of training needs. There are two stages to the appraisal: the research plan development with the Research Group Leader and the formal target setting appraisal. Two areas are discussed in the research plan development meeting:

1. A review of the planned outputs for the year, discussing target journals;
2. A review of planned grant submissions, including plans for maintenance and development of collaborations;
3. Plans for impact including public engagement;
4. A discussion of how to develop new research ideas.

Four areas are covered in detail in all appraisals:

1. A review of the previous year's performance (against agreed targets);
2. The setting of future targets with an exploration of the support required. In addition, researchers' career plans are discussed in terms of what roles people want to consider for the future;
3. Identification of developmental needs. Staff highlight any courses (training, staff development) that they would like to attend and these are then prioritized within the staff development budget;
4. Discussion of workload: staff can describe what teaching and leadership roles they would like to undertake.

Staff workloads are equally distributed across all staff. This workload is highly detailed to ensure fairness. We operate a typical 40-40-20 split between research-teaching-and leadership roles (with some leadership roles taking time out of the teaching allocation - research time is protected). All our teaching is research-driven, with all final year projects, final year optional units, and MSc courses linked directly to areas of our research expertise. Research time is extended by reduced teaching loads through judicious use of Graduate Teaching Assistants (introduced in 2015) who are fully-funded to conduct their PhD research.

In addition, the Department provides multiple structures for career development. This involves sending staff on external courses (e.g. for learning new methods). In addition, the University offers support for external bid writing (paid external mentorship), and incentivisation for external bids; the PI gets 5% of the grant income returned into a research account for grant awards over £100,000. The successful acquisition of external grant funding is also incentivised through promotion and contribution-related pay award procedures.

The Department offers circa £77k per annum in support and development for staff (including money for participant payment, conference attendance, staff development, specialist equipment purchases), of which circa £1k per annum is awarded to all staff directly to spend on pump priming for research-related activity. For the remainder, we offer more tailored support for staff who require support and for seed-funding of research projects (approximately £1.5k per project). The University also offers extensive support from our Research Development Support including courses and grant writing assistance:

- access to external one-to-one grant development support,
- writing and grants academies,
- writing retreats,
- dedicated funder/funding stream workshops e.g. GCRF, Horizon 2020,
- funder visits e.g. AHRC, British Academy, Leverhulme,
- a full-time centrally funded departmental Research Facilitator.

All of which led to an increase in bidding activity from UoA4: 9FTE bid in REF2014 to 32FTE in the current REF period.

Support for PGR students

The postgraduate research student culture has rapidly improved since REF2014. Since 2014, there have been 31 new funded studentships awarded and 31.33 successful completions in total. Studentships have been funded from a variety of sources including: Vice Chancellor Scholarships (4), competitive University-wide fully-funded studentships (12), competitive University-wide matched-funded studentships (10), staff fee waived studentship (1), and internally-funded Graduate Teaching Assistant studentships (4). The GTA scheme was introduced in 2015 to provide an opportunity for PhD students with ambitions of becoming an academic to garner experience in teaching and research. The duration of funding for these studentships is for four years, to ensure adequate time can be devoted to research alongside teaching. To add to the transferable skills of these students, they were funded on projects related to impact. We also have a small number (5) of self-funding PhD students. In 2016, the Department also introduced funded MRes schemes, with 5 funded projects in the first instance awarded to projects that met the needs of the research strategy. All PhD and MRes students are members of a research group to ensure that they get support from experts in the field.

The Department also offers financial support to the students in the form of £3k per student to be spent on any research expense (including conference attendance or specialist training). Additionally, PhD students can obtain support for one Gold Open Access fee publication per annum. As part of the research community, all training sessions run for academic staff are open to PhD students within the Department. Ad hoc training for PhD students is also provided as required and identified by the students and their supervisors (e.g. statistics workshops, programming, such as in R, or with specialist equipment). In addition, all PhD students are welcome to attend the advanced training courses run as part of our suite of taught MSc programmes (including experimental methods, neuroscience methodology, statistics, and key transferable skills).

The Department has developed key strategies designed to enhance the quality of the PhD students that it produces. The Department has appointed a **Head of Postgraduate Students (Liu)** whose role is to monitor both the students and their supervisors to ensure that all milestones are being met, that the students are receiving appropriate guidance and supervision, and that the students are gaining the appropriate skills and experiences. In addition, their role is to attempt to source funding for more PhD studentships. One area in which we have extensive experience is in training PhD students to source external funds to support their research. One such student has secured significant funds to spend time studying in Wollongong University, Australia and others have funds from Santander, Experimental Psychology Society and ERASMUS+ to attend national and international conferences. All colleagues who supervise are required to attend a one-day training course and refresh these skills every three years to ensure best practice and the exchange experience of supervisory practice and procedure.

The Department has also created a dedicated laboratory for PhD students to work in. This creates a community spirit that is both cohesive and supportive. Furthermore, the Department runs monthly PhD seminars that are designed to offer training to PhD students (including presentation skills and post-doctoral job application training) and opportunities to talk about research in a relaxed and informal way. We prioritise placing PGRs (explicitly including MRes students) at the heart of a rich, stimulating and engaging research culture. PhD students are also core members of the research groups (Section 1) and attend and present at research group meetings. They present within our research seminar series and contribute to presentations on research done by members of their supervisory team. Our PGRs have led the organisation of the annual Faculty PGR Research Conference in 3 years of the REF period gaining valuable experience in presenting their research but also in important academic and transferable skills in conference organisation and events management. Their own elected representative liaises with the wider institution and sits on our Athena Swan Self-Assessment Team.

All PhD students have access to Bournemouth University's **research training** schemes from the Doctoral College. These programmes provide students with all manner of generic and key

transferable skills (including impact-related topics such as interacting with the media, collaborating with non-academic beneficiaries, and conducting translational research). PhD students also have the opportunity to engage in teaching and marking in order to bolster their academic CVs – however, this has been limited to a maximum of 6 hours per week in order for students to focus on research.

A unique feature of the PhD studentships at Bournemouth University is the emphasis on match-funded, industry collaborative PhD studentships. Fifty (or equivalent in non-match funded) match-funded students are offered across the University annually. These PhD studentships often involve collaborative work within industry conducting work of direct societal benefit. PhD research projects within the Psychology Department have involved collaborations with: the NHS, BCP Council, Microsoft, the Defence Science and Technology Laboratory (dstl), Age UK Dorchester, Chorus Care PLC, Dorset Police, The Royal Bournemouth Hospital, various UK and European Food Industry partners and the US Army.

Equality and diversity

The current HoD is a university champion for equality and diversity (a supportive role to those who may be suffering from harassment etc.). We are a diverse department in terms of nationality (50% non-British), sexuality (7% non-heterosexual), ethnicity (15% BAME), disability (11% with disclosed disability), with a positive gender mix; 59% of FTE staff are women (including 60% of the Department's professoriate). BU is a Bronze award holder for the Athena SWAN Charter for Women in Science, and a member of the Positive for Disability 'Two Ticks' scheme. All staff with responsibility for recruitment receive diversity and equality training to ensure that all relevant principles are upheld. The HR Department and the Research Committee review these procedures and monitor the Department's commitment to good practice. The Department values transparency. Most decisions are made through committees that have minutes produced and made available to all staff on our internal computer network. Membership of committees is reached through open nomination or due to role (e.g. HoD). The Department itself is also a Bronze award holder for Athena SWAN (obtained in 2018) with a commitment to secure Silver by 2022. Staff are entitled to six-month teaching and admin respite following return from maternity leave (9 staff have benefitted from this). We have on-site child-care provision for ages 3 months-14 years. This is provided by an on-campus nursery and pre-school (ages 3 months-5 years, Ofsted Outstanding) which runs throughout the year and our Sport BU team (ages 5-14) which runs during the Easter, summer and Christmas holidays. We have committed to scheduling all of our departmental meetings within core hours of 10am-4pm and moved our research seminar series to 3pm.

Our EDI Lead (**Seiss**) leads a committee whose responsibility is to ensure that we have fair representation (in terms of gender, sexuality, ethnicity, and career stage) in all committees. All committee chairs must send reports to the EDI Lead annually regarding how they have met equality goals. For example, in appointments, 68% of appointments were female (63% of applicants were female), of which 100% of professorial appointments were female, 16% of appointments were from BAME backgrounds. Additional policies include:

- 1) All Departmental promotional material is evaluated to ensure that it highlights the gender and ethnic diversity within the Department.
- 2) All Departmental analyses (including student performance, grant successes, promotions and pay progressions, mock-REF output ratings, investments awarded from the Department) are split by gender, sexuality, and BAME status to ensure that there are no biases. Actions include: enhancing the annual appraisal system to ensure that *all* staff are actively encouraged to apply for promotions, running training workshops six months before promotion deadlines for staff to consider applying for promotions, the creation of a Departmental newsletter designed to celebrate all staff successes. These analyses are made public to the Department to ensure transparency.
- 3) All leadership posts within the Department are advertised to all staff. Interviews are held for all posts.

Annual surveys to explore EDI are acted upon and shared with the Department. Staff are encouraged to take leadership courses. Four members of the Department have taken the **AURORA** leadership course run by the Advance HE and one member has taken a course designed to promote leadership in **BAME** staff. Leadership roles within the Department are typically rotational to ensure that staff can engage with them without long term impact on research. The Department offers extensive opportunities for flexible working and part-time hours. Two staff have taken a career break in the REF period. Five staff have changed their working pattern in the REF period (with two people changing it twice). The Department and University run mandatory training for EDI on unconscious bias, bullying, bystander intervention, and diversifying the curriculum. The Department has supported activity to mark key Equality and Diversity calendar dates such as World Mental Health Day, Eating Disorder Awareness Week and Mental Health Awareness Week. Support has been shown through sharing research or engaging students in the calendar dates by providing the opportunity to share research. The outcome from our EDI initiatives is evident in our favourable percentage of women professors (60%) and women in research leadership positions (59%) within the Department. Indeed, the REF team are made up of 2 males and 2 females with two further staff (1 male and 1 female) trained up as understudies during the process. All members of this, and our mock REF review panels, have completed the Marshalls Equality and Diversity training as outlined in our Institutional Code of Practice. The mixed gender and grade team was designed to ensure a collective approach and promote career development and succession planning.

3. Income, infrastructure and facilities

Income

The Department's **external grant income** has grown since REF2014. Income has increased from £240k to £1.55 million from REF2014 to REF2021. This equates to a doubling of research income per submitted academic (from £17k per FTE to £35k per FTE), which is especially impressive given that 30.4% of our staff have accepted circumstances that reduce the number of required outputs. Bidding rate has increased with an average submission of 43 bids submitted across the Department in 2020 compared to 11 bids in 2014. Over the REF period, the Department has employed circa. 20 externally funded post-doctoral and pre-doctoral research assistants. Funders include (Figure 3.1): the ESRC (**Weiner**), the NIHR (**Nyman** – Career Development Fellowship), the Wellcome Trust (**Hills**), Royal Society (**Meso**), British Academy (**He, Hills, Parris, Renshaw-Vuillier**), The Leverhulme Trust (**Bate**), European Commission FP7 (**Appleton**), and CREST (**McAlaney**). These funded projects have led to several higher profile publications and impact case-studies within the UoA. For example, Bate's Leverhulme Trust Fellowship enabled her to spend considerable time developing her research profile, leading to seven publications in face processing and prosopagnosia. The work allowed her to continue to develop her impact case study. Given the large percentage of ECRs in our Department, we have targeted smaller grant awarding bodies, industry, and charities to further our research and impact. For example, awards from the Experimental Psychological Society (**Mestry, Attard-Johnson**), the British Academy (**Gregory, Hills, Slattery**) and the NHS (**Bolderston, Thomas**) have enabled ECRs to build up their track record in grant management. Once a track record is built up with producing publications from grant studies, the next stage is to submit for bigger, more prestigious funders as collaborators with established professors, finally progressing to leading on big bids.

Infrastructure and Facilities

In addition to external grant income, the Department has been well supported by the University in the capital investment in **equipment** over the recent assessment period (see Figure 3.1). Major investment has been forthcoming in the neuroscience research equipment including: £30k on EEG (including £52k for co-registration), £35k on TMS, £70k on fMRI access at *Poole Hospital*, and a recent investment of £2million Siemen's Lumina MRI (£839,535 contribution to UoA4). We have two dedicated-EEG laboratories occupying 32.24 m². Our EEG equipment

includes: one BrainVision BrainAmp DC system, two Biosemi ActiveTwo systems, and two ANT Neuro eego sports systems. The eego sports systems are mobile systems equipped with additional physiological measures and can be used outside of lab space. These were made available with the investment of £88k dedicated to EEG equipment. Our DuoMag XT-100 Transcranial Magnetic Stimulator is used in a shared laboratory of 11.96 m² space. To support social neuroscience research with multiple persons, this group also developed and promotes hyperscanning EEG (recording EEG from two persons simultaneously; **He**), making Bournemouth University one of the few universities equipped with this capability in the UK. Our Visual Cognition laboratory has been supported by £67k of investment in new eye-tracking equipment and high-resolution computer display. These are held in three dedicated laboratories occupying 20.73m². Eye tracking@BU is well placed to meet the challenge of investigating naturalistic eye movement behaviours because it has unique eye tracking labs that include mobile, static, and perambulatory systems, as well as wide field of view virtual reality and 3D eye tracking setups. This puts BU in a unique position and ahead of most other, if not all, UK-based psychology departments to study visual cognition in naturalistic conditions. These are in addition to our existing cubicle space (14 cubicles, 84.96m² and our observation laboratory including a two-way mirror (61.60m²).

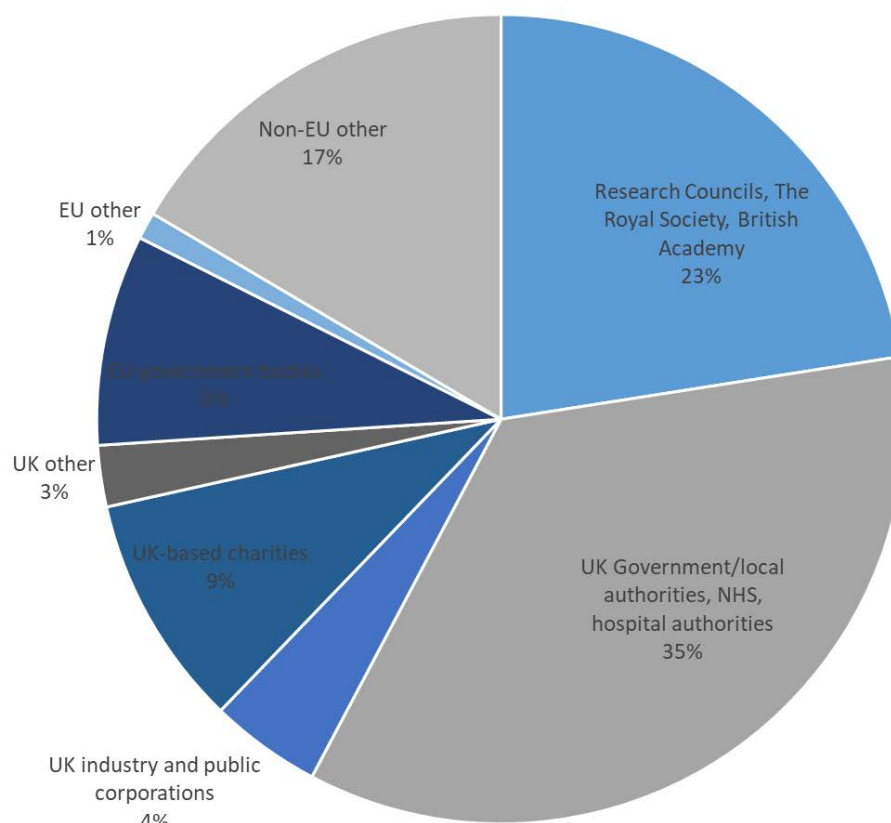


Figure 3.1. Income sources

Two members of the Department are on the Institute of Medical Imaging and Visualisation (IMIV) procurement & research committee and were involved in the selection of BU's MRI scanner. We directed the development of the user's registration system for fMRI research, specification of software packages, and equipment for neuroscience research. Our access has been indicated at between 5-10 hours per week. The Department also supports data collection and recording of MRI/fMRI/DTI data at the MRI suite in Poole Hospital. The MRI machine (3T Philips Ingenia, initial cost of £1.43 million, currently being upgraded to a £1.8 million scanner) is equipped with tested protocols for neuroscience research, MRI compatible eye-tracking recording, quality

assurance checks and enhanced data-transfer. We also have access to a new static PET scanner offering hybrid diagnostic imaging (PET and CT) at Poole Hospital for ageing studies.

The space that the Department occupies has increased by 20% over the REF period. Total area occupied by the Department is 858.69m². Finally, an annual budget supports participant reimbursement (currently £7k), an extensive psychometric test library (currently £6k), and online experimental or survey management software such as Sona-Systems, SISO, Testable, Pavlovia, and Qualtrics (currently £17k). We have one of the largest databases of people with Prosopagnosia in the country.

A key part of the Department's research infrastructure is in the **professional support staff**. While these are shared among the other Departments in the Faculty, they have dedicated roles to support research. The Department invests in grant writing support from an experience research scientist (Remington) to facilitate and improve grants submitted by members of the Department. The Department also has 4.5 FTE technicians offering IT, programming, and technical support to researchers. These are led by Tomkins, focusing on IT support, and Green, focusing on programming and EEG support. All research within the Department is approved by the University Research Ethics Committee.

4. Collaboration and contribution to the research base, economy and society

Our focus on interdisciplinary and collaborative work and our strong emphasis on impact-related research has been widely acknowledged at both national and international level. The Department is a major hub for national and international research collaborations, with 38.1% of outputs involving international collaborations (see Figures 4.1 and 4.2).

Part of our Research Strategy instructs each of our research groups to host collaborative research/training events. These involve hosting roundtable conversations with members of the Department and external collaborators. Annual collaborative events are held between Dorset and Wiltshire Police and members of the Department (**Cole, Huang**). Bi-annual events are also held between the NHS and members of the Department (**Bolderston, Seiss**). Ongoing collaborations with the Acquired Brain Injury Rehabilitation Service and the Adult Neuropsychology Service within Dorset HealthCare University NHS Foundation Trust (**Shanker, Parris**), have led to recent journal papers. These UoA initiatives are in addition to University-wide ones including Steam Labs involving industry partners and academics. For example, this has led to a collaborative project involving Dorset Creative to investigate better tools to support face recognition in police settings (**Hills**) and an investment from the US Army to fund research into fake news, culture and heuristics (**McAlaney**).

To contribute more widely to the local and national community, researchers in UoA4 act as trustees and patrons of charities and are on Boards of Governors for external organisations. Our involvement is to improve their working practices and to guide and respond to their research agenda. These include: Acts Fast (**Cole**), DorsetMind, Dorset Healthcare NHS Trust, and DorPIP (**Mayers**), Gordon Moody Association (**McAlaney**), Wessex Cancer Trust (**Arden-Close**).

Through these links and our Impact Strategy (Section 1), we have had several projects that have impacted the local and national economy and society and beyond those listed as Case Studies developed in collaboration with practice partners. These include: the creation of an online self-help tool and a resilience-based intervention for surgeons to deal with adverse surgical events; and evaluating and developing new evidence-based campaigns aimed to reduce sexual violence.

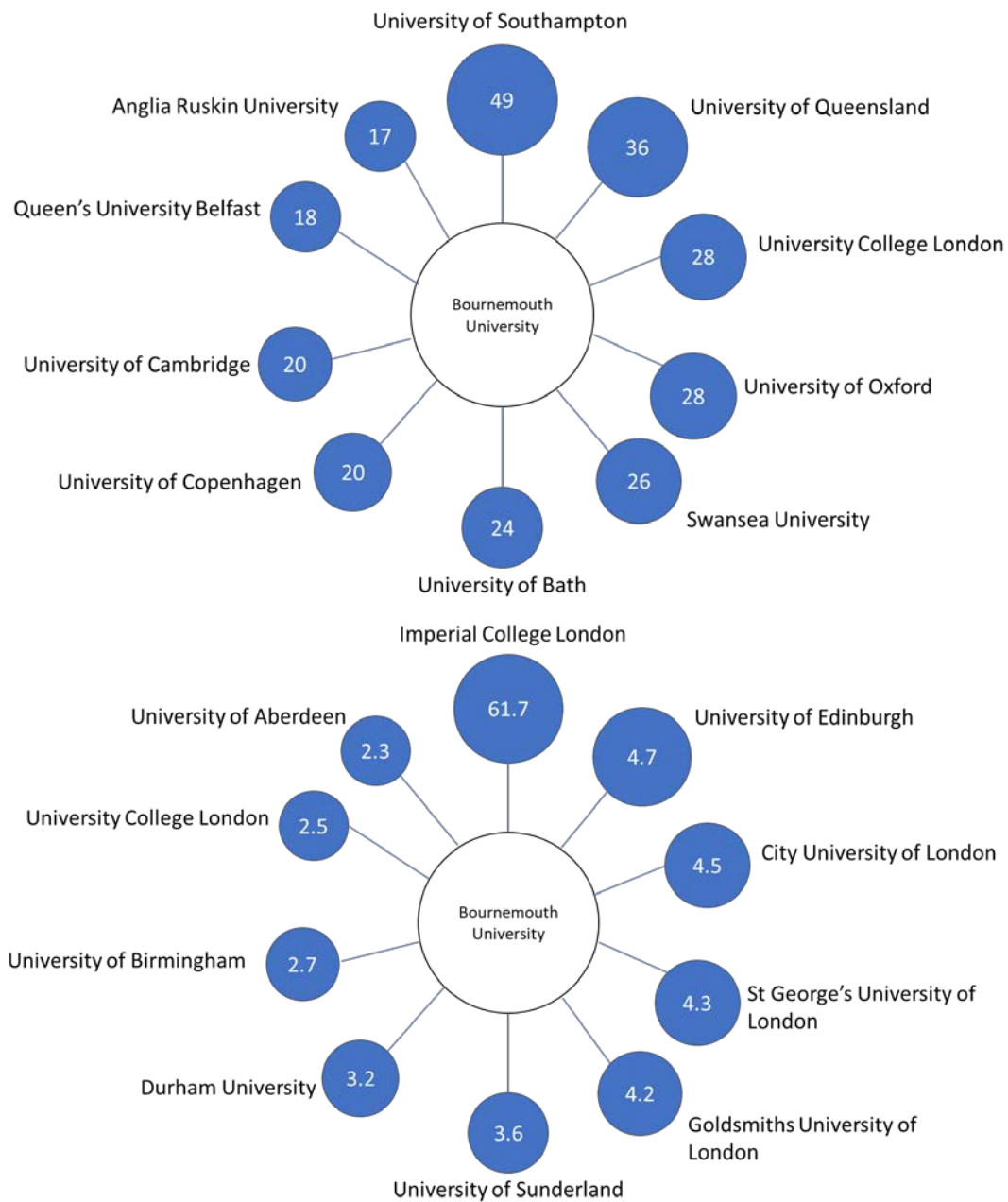


Figure 4.1. Network maps of UoA4's top collaborating institutions by i) highest number of outputs as indexed in Scopus. ii) strength of collaborations using field-weighted citation impact (FWCI). SciVal® database, Elsevier B.V., <http://www.scival.com> (downloaded on 15/01/21)

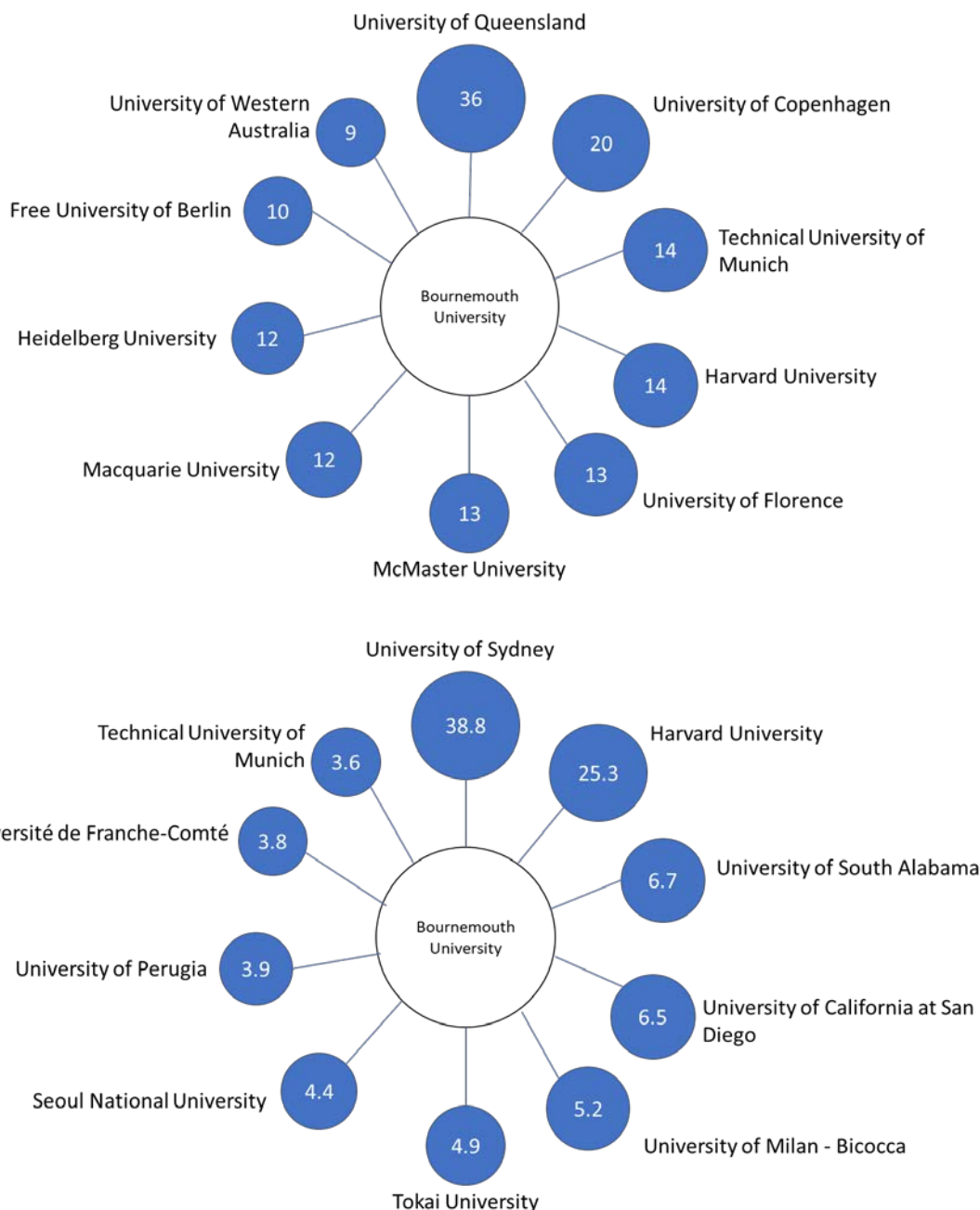


Figure 4.2. Network maps of UoA4's top international collaborating institutions by i) highest number of outputs as indexed in Scopus. ii) strength of collaborations using field-weighted citation impact (FWCI). SciVal® database, Elsevier B.V., <http://www.scival.com> (downloaded on 15/01/21)

Our Research Strategy encourages staff to undertake major research projects abroad involving high-profile international collaborations, by spending up to six months of every year abroad to conduct research (we modify our teaching schedule to enable these collaborations to develop). Over 40% of research outputs from UoA4 involve international collaborations. Example collaborations include:

- Prof Appleton is working on the VeggiEAT project funded by the EU, Marie Curie: IAPP scheme, €1,611,709. This project aimed to understand the sensory determinants of vegetable consumption, develop novel vegetable dishes based on these sensory characteristics and look at the value of nudging for promoting the consumption of these dishes in out-of-home dining situations. Project partners were: Copenhagen University, Denmark; Bonduelle (food industry), France; Institute Paul Bocuse (food industry), France and Universtat di Firenze, Italy. From the project we have published at least 14

peer-reviewed publications (I have been involved in 14, but there are also others that were site-specific), and 2 of these were in professional journals;

- Dr Slattery has been working with Microsoft to produce basic level research on reading efficiency that can lead to refinements in their software packages. This collaboration has led to three match funded PhD studentships, a funded post-doctoral researcher and 10 publications;
- Dr Angele visited the Chinese Academy of Sciences Institute of Psychology in Beijing and Tianjin Normal University, funded by the British Academy and the Chinese Academy of Sciences President's International Fellowship Initiative. These visits have resulted in four publications so far.
- As part of a 3 year Global Research Challenge Fund (GCRF, Bournemouth University – funds from Research England), Dr Shanker was awarded £70,000 for a 4-year project (2017-2021) aimed to make a difference to mental health accessibility and resilience in India and Nepal (with a focus on rural areas), focusing on behavioural change and making a difference to improving mental health (by more accessibility, breaking taboos and training local stakeholders). The researchers are working with a local NGO and Symbiosis International University;
- Dr McAlaney received £2,898 from the Great Britain Sasakawa Foundation to foster research collaboration (including a PhD student) on the topic of cybersecurity and psychology with researchers at the University of Tokyo (Dr Miyamoto);
- Dr Draycott, with colleagues from West London Health Trust and Swinburne University Australia, is working on the Dynamic Appraisal of Situational Aggression (DASA). The DASA is recommended as a tool in NICE guidance to predict acts of violence over a 24-hour period, but the evidence base requires further development and refinement. This has led to publications reporting the predictive validity of the DASA in a high secure psychiatric service;
- Dr Moseley and Prof Turner-Cobb have an on-going collaboration with Dr George Slavich, Director of the UCLA Laboratory for Stress Assessment and Research (Cousins Center for Psychoneuroimmunology), USA, investigating lifetime stress in autistic adults. A key paper resulting from this collaboration is currently in submission;
- Prof Appleton worked on the FoodSMART project, funded by the EU, Marie Curie: IAPP scheme, €499,500. This project aimed to understand the food-based information (nutrients, allergies, provenance, etc) that workplace canteen users would like to receive, and then develop an associated mobile phone app. Project partners were: Copenhagen University, Denmark; Thessaloniki University, Greece; Institute Paul Bocuse, France (food industry) and Ronge and Partners, Austria (food industry). From this project we have created a prototype app that does as required, and have five peer-reviewed publications;
- Dr Parris worked on a 3-year multi-site project (Université de Rouen-Normandie, Université de Poitiers and the Université de Clermont Auvergne) that was awarded £182,608, funded by the Agence Nationale De La Recherche (with further support from a RIN Tremplin grant) and working with Prof Augustinova. The aim of the research is: 1) the better understanding of cognitive control in the young and elderly through the employment of more refined measures of selective attention and a number of research methods and ultimately; 2) the development of a new neuropsychological Stroop task test for use in clinical settings;
- Dr McAlaney travelled to Sao Paulo, Brazil, in December 2016 at the invitation of a consortium of alcohol companies and youth organisations to talk about how social norms research could be used to promote safer alcohol use;
- Dr Angele, funded by the Royal Society and the British Council (£12,890) has been collaborating with colleagues at the Federal University of Ceará, Brazil, on a project on multilingual reading and using mobile phone applications to teach English in public schools in disadvantaged areas;
- Prof Appleton has led a systematic review for Unilever, involving colleagues from Wageningen University, the University of Helsinki, resulting in a recent award of €1.62

million from the Top Institute for Food and Nutrition, the Netherlands, in collaboration with 8 Global Food Industry partners, for a project entitled Sweet tooth: Nature of Nurture;

- Dr Vuillier, collaborating with the University of Amsterdam (Dr Sauter), is exploring how wellbeing in mental health and illness has changed around the world using the largest dataset of this type to date (over 26,000 participants in 51 countries). The work has led to three submissions;
- Dr Nyman, collaborating with Southern Health NHS Foundation Trust, Dorset HealthCare University NHS Foundation Trust, Solent NHS Trust, Alzheimer's Society, Elemental Tai Chi, was awarded a highly competitive and prestigious National Institute for Health Research (NIHR) Career Development Fellowship (£686,582) for a feasibility randomised controlled trial using Tai Chi for people with dementia. 10 peer-reviewed publications from the project have resulted from this work, in addition to an appearance as an expert witness before the House of Lords;
- Dr Angele has been named an External Researcher at the Cognitive Science Research Centre of Nebrija University, Madrid. There are several publications currently in preparation together with colleagues from Nebrija University and the University of Valencia.

Researchers in UoA4 are keen to improve the discipline in terms of ensuring that work is open access, maintains the highest standards of research integrity, is ethical, and is reproducible (Section 1). Researchers in the Department have been acknowledged for the contributions to the field through several awards for their work (**BPS Book Award 2017 Textbook Category:** Turner-Cobb; **BPS Book Award 2018 Textbook Category:** Cole) and their engagement with charities (**Fellowship of the Royal Society of Arts:** Mayers). Staff sit on important national and international committees, including the Nutrition Steering Group for the National Institute of Food Science and Technology (**Appleton**), the Experimental Psychology Society (**Johnson**), Treasurer of the Faculty of Forensic Clinical Psychology within the Division of Clinical Psychology (**Draycott**), the Association of Heads of Psychology Departments (**Hills**) and the British Psychological Society Division of Health Psychology (**Arden-Close**).

Researchers have been awarded a number of high-profile fellowships including the **British Academy Mid-Career Fellowship** (Bate), the **NIHR Career Development Fellowship** (Nyman), the **Margaret Mead Award** from the British Science Association and delivering the award lecture at that year's British Science Festival (Bate). Members of the UOA have also been invited to give important lectures at public engagement science events including: at the Royal Society of Medicine (**Parris**), Royal Institution, London (**Nyman, Turner-Cobb**), Royal College of Physicians and Queen Anne Hospital, Portsmouth (**Mayers**), British Nutrition Foundation (**Appleton**), British Human Computer Interaction Conference, (**He**), Property and Casualty Insurance Compensation Corporation, Canada (**McAlaney**), Royal College of Surgeons (**Bolderston**), University of Canberra/Australian Defence Force Academy in Australia, a trip funded by Department of the Prime Minister and the Cabinet of Australia (**McAlaney**).

Members of the Department have served as editors on the editorial boards of 11 leading international peer-reviewed journals. Members of the Department have also organised international: (**EPS Conference, 2019**, Hills, Johnson; **British Feeding and Drinking Group 2018**, Appleton; **1st World Congress on Falls and Postural Stability** in Kuala Lumpur, Nyman; **International Convention of Psychological Science 2019**, Paris, run by APS, He) and national: (**British Conference of Undergraduate Research, 2017**, He; **Emotions in eating disorders Conference, 2019**; Renshaw-Vuillier) conferences at Bournemouth University. UoA members also sit on conference committees (**American Psychosomatic Society**, Turner-Cobb) and are members of the **ESRC Review College** (Turner-Cobb). Encouraged by our research strategy, members of the Department have organised specialist symposia, conferences, and plenary discussions including: **Social and Behavioural Science for Cyber Security** (McAlaney) attended by academic staff and representatives from industry, the military, and the National Crime Agency; **Alarm systems in hospitals** (McDougall); **Cross-cultural discussions on sexual violence and forensic interviewing** (Huang); **Under-eating in older adults** (Appleton) and **Campaigns to Reduce Sexual Violence** (Hills, McAlaney,

Cole). The Department supports these conferences both financially and with administration resourcing. The University has a dedicated team whose responsibility it is to support the organisation of such events.