

Institution: City, University of London
Unit of Assessment: A4 Psychology, Psychiatry & Neuroscience
1. Unit context and structure, research and impact strategy 1.1 Context City's submission to Unit of Assessment A4 comes entirely from our Department of Psychology, a longstanding constituent of the School of Arts & Social Sciences (SASS). The Department's mission is to generate world-leading research on mind, brain and behaviour that brings lasting benefits to society. We espouse an egalitarian ethos of "mutual excellence" that is both nurturing and challenging. For REF 2021, we are returning 39 research and education (R&E) colleagues (34.9 full-time equivalents (FTEs); 49% women) across seven research groupings. However, we recognise the invaluable support provided by additional colleagues with educational role profiles, who help ensure that our researchers benefit from sufficient dedicated research time. Strategy for this unit emerges from interactions at three interconnected levels: University, School and Department (Figure 1). Figure 1. Unit structure in the Institutional context. Arrows show lines of communication in the development and implementation of strategy. A distinct unit-level voice is articulated by the Department's Research Committee, with leadership from the Head of Department (HoD), Research Committee Chair and REF Lead. The Research Committee oversees a ring-fenced annual budget (£81k in 2019/20), and both the Committee Chair and the REF Lead influence upwards via seats on the School Research Committee. Hence, our management structure integrates unit-level policies with those of the School, and we will often refer to both levels here, alongside University provision (expanded upon further in REF5a).

We use groupings to organise our researchers and promote collaboration and grant capture. We distinguish between *groups/units*, operating largely within the Department, and *centres*, which, while based in the Department, are established with specific (often cross-disciplinary) strategic goals in mind and thus incorporate staff from across the institution. In general, we recognise that leaders in high-performing research environments deserve (and thrive under) a system of accountable autonomy. Hence, we see the formation of research groupings as an interplay between organically developing staff initiatives and a facilitative strategic culture that looks to promote collaboration and competitively assign internal seed funding in order to reward and develop the best ideas. As outlined in greater detail below, new research centres (illustrated in Figures 2 and 3 with grey backgrounds) are key in the implementation of our research strategy.

REF 2014

Organisational Psychology
 Counselling & Health Psychology
 Cognitive Neuroscience Research Unit
 Developmental Psychology incorporating Autism Research Group
 Human Memory, incorporating Centre for Memory & Law
 Decision Making & Behavioural Economics

REF 2021

Organisational Psychology
 Centre for Excellence in Mindfulness Research (CEMR)
 Centre for Psychological Wellbeing & Neuroscience (CPWN), incorporating Applied Psychology Clinic
 Cognitive Neuroscience Research Unit
 Autism Research Group
 Human Memory, incorporating Centre for Memory & Law
 Centre for Mathematical Neuroscience & Psychology
 Decision Making & Behavioural Economics

Figure 2. Evolution of department research groupings, highlighting the creation of new strategic centres (grey).

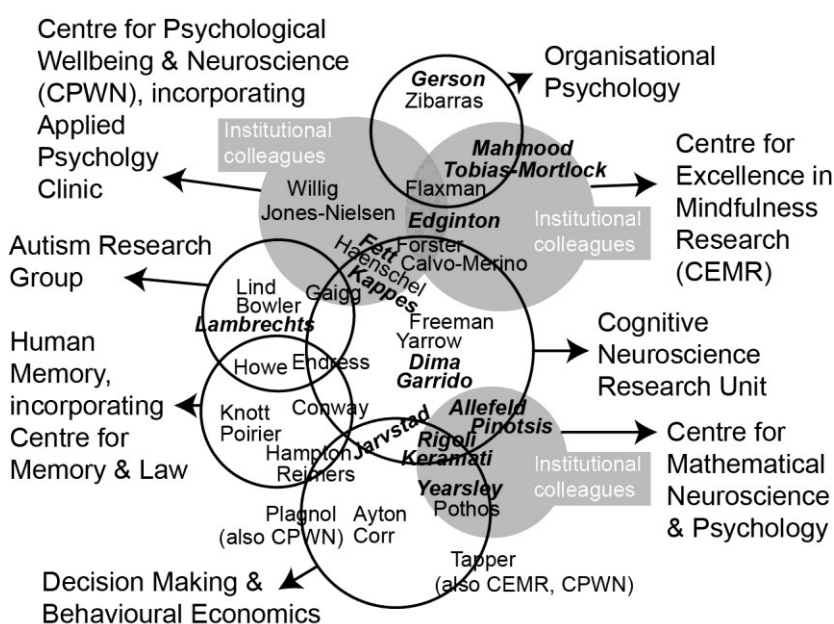


Figure 3. Current allocation of staff to research groupings. Staff recruited since 2014 are shown in bold italics.

1.2 Strategic achievements in research and impact

At REF 2014, we presented a strategy to generate world-leading research and impact that prioritised:

- 1) Sustaining high-quality recruitment to support existing research groupings and their cross-fertilisation
- 2) Facilitating the acquisition of external funding
- 3) Promoting collaboration
- 4) Strengthening forms of dissemination, specifically targeting potential beneficiaries of our translational research.

In this section, we highlight successes in achieving the specific objectives relating to these four priorities. Because our initiatives have tended to serve several strategic goals at once, we do not always attempt a strict mapping from each point above to subsequent actions, but we hope that the links will be fairly self-evident. We use **bold** to highlight sections linking to specific points in the REF5b panel criteria document.

At heart, our **research and impact strategy** has been a simple one: recruit the best in terms of talent and collaborative potential, then provide support and incentivisation in order to retain staff and encourage them to let their strongest ideas flourish (Priority 1). To achieve this, we believe that the allocation of internal research resources needs to be (i) competitive, promoting quality, and (ii) nimble, reacting to trends and developments as they emerge within the diverse subfields of psychology, but also (iii) developmental, supporting new staff, and (iv) sustainable, underpinning programmatic research that can translate into large-scale societal impact. Examples evidencing the success of this strategy include the various internal School and University funding schemes from which we have benefitted (see Section 2). In total, 17 members of staff have received over £200k since 2014 from schemes such as pump-priming, knowledge-exchange awards, and impact-development awards. Maintaining a staff base that is both excellent and highly motivated supports our overarching aim of achieving world-leading research and impact, as is apparent in our outputs. With journal-level metrics already high at REF 2014 (average journal impact factor for submitted papers around 5, up from just over 1 in 2001), in this cycle we have tracked improvement at the article level. For our submitted outputs (considering articles out at least a full year), mean Scopus cites *per year* show a near doubling, from 4.9 (REF 2014) to 8.8 (REF 2021). Although citation data alone lack nuance as a measure of article quality, they evidence the ever-increasing visibility that our research enjoys. This visibility is further promoted by the productivity of our researchers: submitted staff have on average published 18 peer-reviewed journal articles each since 2014.

These achievements are facilitated by our highly active Research Committee, whose composition reflects the Department's diversity in terms of gender, research interests and career levels. In addition to disbursement of departmental funds, the Committee supports the HoD and other senior staff in promoting the strategic development and uptake of School and University opportunities. One example is the centrally funded £66k refurbishment of the transcranial magnetic stimulation (TMS) lab, achieved via a competitive business case in 2016 and complementing a much wider (£832k) improvement of our research facilities (see Section 3).

These internal processes build grant-writing confidence and expertise while underwriting the pilot data and infrastructure that make larger external grants feasible. Such policies have borne fruit. The over 150% increase in our external grant income (i.e. audited spend) during this assessment period (compared to REF 2014) evidences success relating to Priority 2.

We have consolidated our existing strengths through strategic investment in excellent staff (see Figure 3). This has substantially broadened the scope of the research activity within each grouping. For example, our Cognitive Neuroscience Research Unit has recruited expertise in neural-level modelling (e.g., Pinotsis) and brain connectivity analyses (e.g., Dima), while our Decision-Making group has introduced Keramati's machine-learning approach to understanding cognitive planning. As promised in our REF 2014 strategy, both groups have also developed new MSc programmes to act as PhD feeders. Existing groups have also helped to transfer expertise across generations in the pursuit of supra-individual research programmes. For example, our Autism Research Group, founded by Bowler in 1996, now includes two subsequent generations of former postdoctoral researchers and PhD students as permanent academic staff (Gaigg, Lind and Gaigg's former PhD student, Lambrechts).

Key to the enactment of our REF 2014 strategies has been the **creation of three new research centres**, which, among other things, embed our expertise within both local and wider communities to foster translation of knowledge (Priority 4). For example, the new Centre for Psychological Wellbeing & Neuroscience's community launch event in 2015 helped to create an active social partnership in Hackney and, in particular, engaged charitable and public-sector organisations such as Mind. Hence, the Centre has become a conduit for the dissemination of knowledge and the translation of research findings into policies and treatments. The Centre also incorporates a counselling service (the Applied Psychology Clinic) for staff and students of City. Critically, its interventions are subject to research evaluation, funded by the British Psychological Society (BPS).

Our impact-focused centres spread and amplify the embedded expertise that is evident within our selected impact case studies. These showcase our established (and highly applied) Organisational Psychology group. Zibarras' case study illustrates our extensive work, both historical and ongoing, on recruitment systems that promote efficiency, fairness and diversity (with 60,000+ junior doctors and 180,000+ medical school applicants assessed since 2014 via tests originating in our research). Silvester's case study deals with the reform of parliamentary governance and emerged from her work at the interdisciplinary Centre for Performance at Work, which existed from 2008 to 2015 in collaboration with City's Business School. Finally, Flaxman's case study illustrates widespread adoption of his mindfulness interventions in the workplace (e.g., the programme is used by 25 NHS trusts, among numerous organisations in at least four countries). Importantly, Flaxman's success has foreshadowed key strategic developments since 2014. Applied mindfulness research has grown (via the recruitment of Edginton, Mahmood and Tobias-Mortlock) into a new Centre for Excellence in Mindfulness Research. This Centre was launched with several events including a panel titled "Mindfulness, Wellbeing and Performance in High-Stakes Contexts: The New Frontier", reflecting the expansion of our mindfulness agenda to new occupational fields such as the armed forces. Gaigg provides an important link between this mindfulness impact agenda and our Autism Research Group, which has recently created and distributed an "Evidence Based Guide to Anxiety in Autism" for local education authorities. This followed a pilot eight-month

randomised controlled trial showing how an online mindfulness-based cognitive therapy (MBCT) self-help programme could reduce anxiety in autistic adults.

The language of impact now suffuses discussions at all levels of the Department, with regular reports and updates via the Dean's and HoD's newsletters, and at staff research days and departmental meetings. The latter supplement more occasional workshops with impact consultants. This cultural shift, encouraged via mechanisms including workload allocation, yearly appraisals, training opportunities and availability of administrative support, is just as important as specific restructuring decisions in fostering knowledge co-production. This is illustrated by the numerous individual staff initiatives around consultancy, advisory positions, spinouts etc. detailed in Section 4. In tandem with these cultural changes, this REF period saw substantially expanded use of new media for research dissemination, e.g., the Twitter accounts of the Cognitive Neuroscience Research Unit (@CNRU_City) and the Autism Research Group (@cityarg). The Department's account (@CityUniPsych) is facilitated by a Senior Communications Officer to raise our research profile and has over 900 followers.

The new centres also promote strategic aims for basic research, particularly **increased collaboration (Priority 3)**. During this REF period, Pothos (as HoD) created a new Centre for Mathematical Neuroscience & Psychology by recruiting mathematically excellent researchers (Allefeld, Keramati, Pinotsis, Rigoli, Yearsley). This initiative shows how, as a relatively small department, we seek to exploit circumstances (here, high-profile research placing us on the maps of the best mathematical–psychology early career researchers (ECRs)) to drive strategic progress (here, developing critical mass in a highly influential but fairly niche and infrastructure-light area, where we can realistically compete with and even outperform the bigger players). This Centre is cross-cutting, representing an accessible resource that invigorates all of our existing research groups with enhanced modelling skills. Critically, the Centre also promotes **interdisciplinary collaboration** with other departments (such as the School of Mathematics, Computer Science and Engineering) and research hubs (e.g., City's Data Science Institute) across the University and beyond. Indeed, two of the Centre's recruits are physicists by training.

Enhancing interdisciplinarity is a core strategic goal for all of our centres – exemplified, for example, by strong links between the Centre for Excellence in Mindfulness Research and staff in the School of Health Sciences and SASS's Centre for Food Policy. Naturally, our staff reciprocate as active members of the research centres hosted in other departments, such as Plagnol's involvement with Sociology's Centre for Research on Work and Society. These interactions are supplemented by widespread advertising of seminar series across departments and schools, and by staff initiatives and central events, such as research speed-dating lunches. Results include:

- Gaigg's 2016 collaboration with Eduardo Alonso from the Department of Computer Science, securing £70k from the Baily Thomas Charitable Fund to investigate learning and reward processing in autism.
- Yarrow's BBSRC grant on decision-making in sports (contributing approx. £300k to this REF's spend); a collaboration with Joshua Solomon from the Department of Optometry, arising from the "Eyeball Kids" vision-science journal club. Links between these departments have now been recognised and promoted internally through seed funding (£11k) following a pre-proposal meeting with Wellcome to develop Haenschel's

collaboration with John Barbur, which investigates perceptual visual dysfunction as a biomarker for schizophrenia and a predictor of wider mental health.

Collaborations also abound within our research groupings, evidenced by numerous co-authored publications and joint grants. Around 15% of our submitted outputs are authored by two or more colleagues from within the Department. Some of the more productive collaborations include those from:

- The Decision-Making group, between Hampton, Pothos and Yearsley (five co-authored publications in this REF period) and between Corr and Plagnol (four publications)
- The Human Memory group, between Howe and Knott (seven publications and an ESRC project grant)
- The Cognitive Neuroscience Research Unit, between Calvo-Merino and Forster (eight publications), Calvo-Merino and Gaigg (five publications), and Forster and Yarrow (three publications and a Leverhulme Trust project grant)
- The Autism Research Group, between Bowler and Gaigg (19 publications).

1.3 Research integrity and open science

Alongside our pursuit of research excellence, we remain mindful of the dangers to science posed by the current system of incentives, which can promote unethical behaviour. We actively support City's adherence to **the Universities UK concordat to support research integrity**, as evidenced by events such as our 2018 workshop "The Replicability Crisis in Biomedical Science: Issues and Solutions". This supplemented central University initiatives (such as a 2018 research integrity workshop led by James Parry, Chief Executive of the UK Research Integrity Office, and the 2019 Good Practice in Research week). Several of our staff (Hampton, Mahmood, Tapper, Yarrow, Yearsley) contribute to the City & Birkbeck hub of the UK Replicability Network, and Yarrow and Yearsley have held University steering group and School impact champion positions respectively (see REF5a). Furthermore, our collective culture encourages the publication of negative findings to challenge established orthodoxies (e.g., Lind's 2019 *Journal of Abnormal Psychology* article "The Self-Reference Effect on Memory Is Not Diminished in Autism") and recognises problems in the literature addressable via pre-registration. Many staff now pre-register via journal registered reports, OSF or AsPredicted; at least six have published papers acknowledging these routes and Kappes has received an OSF Preregistration Challenge Award. Naturally, all our research activities undergo ethics review and adhere to BPS recommendations and the General Data Protection Regulation.

We encourage our staff to progress towards an open research environment, for example by incorporating data-management presentations into research away days. This REF period has seen a leap forward in open-science activities, capitalising on the University's research output repository (City Research Online) and research data depository (Figshare), where several of our staff, who now universally hold ORCID IDs, make regular deposits. A recent study (Robinson-Garcia et al., *PeerJ*, 2020; 8: e9410) suggests an 88% green open-access rate at City versus a UK median of 74%. Staff also make use of external depositories such as GitHub and OSF to share code and data, and some go much further: Dima established and co-leads the NIH-funded

international ENIGMA Lifespan Working Group, which focuses on healthy developing individuals and thus far has secured the collaboration of 59 international institutions to recruit 11,550 participants aged 3-90. This project helps to define normal variation according to sex and age to distinguish it from pathological development and has already led to seven publications. Our Research Committee also reinforces Research Councils UK's and Wellcome's policies by inviting applications to fund open-access fees (for sufficiently high-quality journals) where funding is otherwise unavailable.

1.4 The next five years

Moving forward, in support of City's Vision and Strategy 2026, our strategy will retain a focus on our people and the resources we provide for them. **Key strategic goals** (and some of the policies that support them) include:

1. **Recruit, retain and develop the very best staff.** We believe staff want to join and remain at departments where their research requirements – in terms of lab space, equipment, research assistants (RAs), and access to PhD students – are met. We will therefore continue to prioritise capital investments in research infrastructure (see Section 3), offering staff the resources to thrive, and also promote and assist the acquisition of external funding, via both competitive seed funding (see Section 2) and a highly collegiate approach to internal grant review (implemented via the University's new Worktribe system; see Section 3). We will also build excellence from the bottom up, particularly seeking to refresh the large and vibrant pool of PhD students who have supported our research during this REF period. Objectives include:
 - Departmentally, we want to join or lead a UK Research and Innovation Doctoral Training Partnership or Centre for Doctoral Training.
 - The Cognitive Neuroscience Research Unit will attempt to leverage our new status as a college of the University of London to establish a formal agreement with other London institutions ensuring access to fMRI, in order to safeguard recruitment and retention of staff by complementing existing in-house access to EEG, tDCS, TMS etc.
 - The Centre for Mathematical Neuroscience & Psychology aims to build a PhD programme via application to the Leverhulme Trust's triennial Doctoral Scholarship scheme in collaboration with colleagues in the School of Mathematics, Computer Science and Engineering. This objective segues into our second goal.
2. **Promote collaboration and interdisciplinarity.** A central policy will be continued support for year-long research sabbaticals that provide opportunities to maintain and develop international collaborations (see Section 2). We believe policies like these underscore our particular success with funding bodies that prioritise interdisciplinary research (e.g., the Leverhulme Trust's project grant awards to Pothos and Yarrow). More locally, we will continue with our weekly seminar series (which currently alternates internal and external speakers), our bi-annual research days, and our engagement with cross-disciplinary research meetings. Objectives include:
 - Departmentally, we plan to form at least one new interdisciplinary research centre (potentially focussing on behaviourally informed management, to build on existing links between our behavioural economists and City's world-class School of Business).

- The Autism Research Group will develop, in collaboration with the School of Health, an evaluation of the acceptability, feasibility and effectiveness of a parent-led intervention based on the Group's extensive experimental work on memory in autism spectrum disorder. This objective segues into our final goal.

3. **Promote impactful research.** We already enable impact via management policies such as a clear workload allocation for impact case study development, but we will further promote it by increasing the weighting of these activities and making active use of the School's Business Development Manager, who leads on organising stakeholder-engagement events and is supported by a Research Impact Officer. We will also continue to support and capitalise on internal impact-funding competitions, which we describe further in Section 2. Objectives include:

- Departmentally, we will build impact skills into PhD and ECR training, for example supplementing individual staff research mentors by creating a new impact mentor role for the Department.
- The Autism Research Group will complete a clinical feasibility trial in collaboration with the ADHD and Asperger's service of Northamptonshire Healthcare NHS Foundation Trust to assess integrating online MBCT tools with current mental healthcare pathways for autistic adults.
- The Organisational Psychology group will pursue a Parliamentary Office of Science and Technology–BPS fellowship to further enhance embedded knowledge-exchange activities.
- The Human Memory group's Centre for Memory & Law will build on recent translational work (e.g., Howe, Knott & Conway, *Memory and Miscarriages of Justice*, Routledge, 2018) by rewriting a major BPS-commissioned policy piece, *Guidelines on Memory and the Law*, in collaboration with the Law Society, and following up with knowledge-exchange activities targeting barristers.
- The Centre for Psychological Wellbeing & Neuroscience will further formalise collaboration with key community stakeholders, targeting collaborative awards with Mind. The Centre's Applied Psychology Clinic will scale up counselling psychology interventions to better influence key national bodies such as the National Institute for Health and Care Excellence (NICE).
- Finally, the Centre for Excellence in Mindfulness Research will make strategic use of Higher Education Innovation Fund (HEIF) funding to develop bespoke mindfulness toolkits and promote knowledge transfer partnerships with widespread stakeholder engagement.

2. People

2.1 Staffing strategy and staff development

Our **recruitment policy** follows on directly from our research and impact strategy (Section 1) and leverages our high-quality research infrastructure (Section 3). We seek to appoint individuals with strong research achievements and potential who either strengthen existing research groupings, ensuring their sustainability, or can be placed in more than one research grouping, thereby promoting wider collaboration. This REF period has thus seen growth and consolidation in staffing, with 35 new academic appointments (FTE 26.6) against 18 (FTE 12.9) leavers, targeting areas of strategic priority such as mathematical psychology (e.g., Allefeld, Keramati, Pinotsis, Rigoli, Yearsley) and applied mindfulness (Edginton, Mahmood, Tobias-

Mortlock). At REF 2014, we outlined how we had used the University's phased strategic investment in research excellence to appoint professors, providing leadership across key research groupings including behavioural economics and human memory. With these leadership and mentorship roles in place, our **succession planning** entered its next stage during this REF period: we focused on the recruitment of ECRs with strong track records relative to their career level who were well placed to capitalise on our embedded expertise. Hence, new recruits were appointed mainly at lecturer level, ensuring the sustainability of the discipline. However, robust internal development and promotion procedures (see below) have ensured that the Department balances experience with vibrancy in every research grouping. Our R&E staff are 23.1% lecturers, 28.2% senior lecturers, 25.6% readers and 23.1% professors. **All are on permanent contracts**, which remains the norm for our department. This period saw seven of these staff promoted from lecturer to senior lecturer and nine to reader (with two promotions to professor in late 2013). Currently, around a quarter of our submitted staff meet the REF ECR criteria.

Within psychology, **we seek to develop staff across their entire career trajectory**. All new members of academic staff are offered a **mentor**. The mentor's role is to monitor development, advise on research strategy and encourage integration. For example, Forster's mentorship of Fett led to their joint (£9m) application ("Biobehavioural Markers of Adolescent Attention and Depression") to the Wolfson Foundation. A reduced teaching, administration and dissertation-supervision load is applied for the period immediately following recruitment, particularly when an individual is transitioning from a PhD or postdoctoral position (typically a reduction of 50–75% workload relative to experienced colleagues). Practical advice is also provided about sources of financial and other support available in the Department and the University, as well as wider national and international schemes. The University provides associated training programmes, for example in grant application and project management (see REF5a). These are supplemented by more targeted support at a School level, for example via a series of impact-development workshops and expert consultations in 2018.

The Department's policies help to foster the research activities of new and existing members of staff. Many new staff members receive start-up funds, enabling them to get their research off the ground quickly. One example is the construction of our third EEG lab (see Section 3.2), to facilitate the work of Pinotsis. All members of staff can also apply to the departmental Research Committee as well as to University-level and School-level research schemes. **These serve ECRs and mid-career researchers** respectively with basic-research pump-priming, but also support knowledge exchange and impact development at all levels of staff seniority. Awards may, for example, support small projects to collect pilot data for larger grant applications to research councils or charities, or facilitate workshops and events with stakeholders to promote impact. Indeed, **separate pots are ring-fenced for impact-development activities**. The following types of University or School internal award have supplemented the substantial support available at the Department level during this REF period:

- ECR research pump-priming (Dima, £7k; Fett, £10k; Kappes, £5k; Plagnol, £4k; Yearsley, £4k)
- Mid-career research pump-priming (Edginton, £5k; Knott, £5k; Plagnol, £4k)
- HEIF funding (Bowler, 5k; Corr, £12k; Edginton, £15k; Flaxman, £20k; Jones-Nielsen, £5k)
- Impact-development funding (Gaigg, £31k; Tapper, £6k)

- Annual research competition (Calvo-Merino, £11k; Freeman, £12k)
- Industrial strategy seed funding (Calvo-Merino, £23k)
- Enterprise seed funding (Haenschel, £3k)
- Knowledge-exchange seed funding (Tapper, £3k)
- Research enterprise award (Calvo-Merino, £15k)
- Dean's strategic development funding (Haenschel, £11k)
- Learning enhancement development funding (Reimers, £3k)

Departmental policy allows staff members to concentrate their lecturing duties in a single teaching term, providing uninterrupted time in other terms to devote to research. Staff can also expect funding from the departmental Research Committee for one overseas and one UK/European conference per year where they are presenting papers.

Both full-time and part-time members of academic staff are entitled to **a full year's sabbatical** free of teaching and administration duties after seven years of service. A full year is considered the appropriate default position because single-term sabbaticals are rarely sufficient to reinvigorate (as opposed to simply service) a research agenda. Applications, which must outline a promising and viable research plan, are universally encouraged. In this REF period, 17 members of staff (15 of those submitted plus two who have subsequently left) have taken sabbaticals (15 taking a full year), which averages to around five months' sabbatical taken per submitted member of staff. We view sabbaticals as key to both rebooting research programmes and developing and maintaining international collaborations. For example, Hampton's 2018/19 sabbatical was used to visit colleagues in Leuven and Paris, and it is no coincidence that during this REF period he has secured substantial collaborative shares of two major European grants: an ERC Consolidator Grant and an ERC Advanced Grant, worth €1,955,270 (including €186,634 to be based at City) and €2,494,279 (€151,404 at City), respectively. We also encourage **exchanges between academia and business** – for example, Zibarras' 2015–2017 0.4 FTE secondment to Work Psychology Ltd.

Research plans and achievements form an important part of the **annual appraisal process**. The University performs an Annual Research Quality Monitoring (ARQM) assessment of outputs against REF criteria, and the resulting score facilitates appraisal discussions and action plans – for example, adjusting workload, or pairing or grouping more senior colleagues for renewed (co-) mentorship. Demonstrated research and impact achievements (e.g., grant capture, ARQM scores and the development of impact case studies) are weighted heavily in **decisions to promote** staff to senior lectureships, and are the key criterion for promotion to a readership or a chair for those with R&E role profiles.

In addition to academic staff, we have employed numerous **research fellows and assistants** in the period since REF 2014. Our research environment is attractive, as evidenced by the international fellows who bring their fellowships to City in order to be mentored by our staff (e.g., Basieva's Horizon 2020 Marie Skłodowska-Curie Fellowship with Pothos; Christensen's Royal Society Newton International Fellowship with Calvo-Merino). Our research culture has also been enhanced by internally funded research fellows, such as J. Cook, funded from a central University competition. Cook subsequently took up a lectureship at City before moving on to become a Birmingham Fellow, evidencing our commitment to helping our young researchers build careers in science.

REF5a describes the University's thorough implementation of **the Concordat to Support the Career Development of Researchers**. The School lends its weight via a generous research sustainability funding system whereby principal investigators (PIs) who attain fully costed external funding are allocated a discretionary account (over 8% of research income; see Section 3) that can be used to bridge and support research staff (e.g., Yarrow's bridging of postdoc Jalali and PhD student Kohl into their subsequent postdoctoral positions). Researchers are encouraged to engage with facets of teaching that reinforce their research roles – for example, supervising undergraduate or MSc dissertations under the mentorship of their PI. Appraisals for research staff always consider their career development needs in addition to their performance on the research project. Indeed, we regularly recruit lecturers from our PhD and RA pool (e.g., Gerson, Lambrechts and Yearsley in this REF period; Gaigg and Lind in the previous one), **completing the process of integration** and demonstrating the faith we have in the staff and students we develop.

2.2 Equality, diversity and inclusion

Of our R&E academic staff, 49% are women. Although this balance is variable across the four academic ranks, there is no strong evidence of a changing bias with increasing seniority (χ^2 test $p > 0.05$). **Our outputs have been selected** by building on data from annual research evaluations, which incorporate equality, diversity and inclusion (EDI) best practice, including requirements on panel diversity and retrospective equality impact assessments (see City's code of practice). When considering outputs associated with staff employed at 31.07.2020, 42% were linked with women (who constituted 48% of our FTEs). **Internal funding has been equitable** – for example, 65% of the internal awards listed above in section 2.1 went to women. In response to an optional survey question, our staff, who represent 13 distinct nationalities, reported variation in terms of ethnicity and sexuality, evidencing our commitment to promoting research excellence by encouraging diverse perspectives. As expanded upon in REF5a, the University received its **Athena SWAN** Bronze award in 2016. The Psychology Department has contributed substantially to a School-level application (submitted in 2020) with the self-assessment team and, subsequently, the EDI Committee, chaired by a member of our staff (Jones-Nielsen; Associate Dean for People and Culture (ADPC)). The ADPC sits on the School promotion panel, to help ensure **staff who work part time or flexibly** are offered the same career development opportunities as those who work full time. For academics, this means that they are entitled to apply for promotion in the same timeframe as full-time academics, with flexible working arrangements or fractional working time fully considered.

The Athena SWAN process has generated substantial introspection and action within both School and Department. This is not surprising, given the department's research and wider interests in EDI issues (e.g., Edginton's co-founding of the SOFAR mentorship network for female academics; Plagnol's TEDxBerlin talk "Mothers, Work and Well-Being"; and Zibarras' advisory role for Rare Recruitment, a company that recruits diverse applicants into high-stakes positions). The School has hosted Athena SWAN lectures (e.g., "Nawal El Saadawi in Conversation") and events (e.g., the 2018 panel discussion "Navigating the Gendered Terrain of Promotion: An In-Depth Look at Women's Experiences") and created a new set of transparent workload principles informing the Department's workload model. Athena SWAN is now a

standing item on the School Executive Committee agenda and a regular item at the Psychology Department meeting. Psychology staff (e.g., Tapper) have completed the Aurora leadership programme, and, like Jones-Nielsen, many Psychology women occupy or have occupied prominent leadership roles within the Department and wider School during this REF period (e.g., Associate Dean for Education (Knott) and HoD (Edginton)).

The Athena SWAN process has influenced all aspects of recruitment, training and promotion. The School uses inclusive language along with specific wording to attract women and minority ethnic candidates, and the selection panels for all hires (and promotion panels) include at least one woman and one man (with University policy requiring explicit justification should this not be possible). Seven of our staff reports having attended the University's Inclusive Leadership training, aimed at countering unconscious bias in line managers. A recently created and circulated School "Staff Guide" includes information on family friendly and other equality-supporting policies. It includes flexible working and long-term leave policies, and information on appraisals, career progression etc. The guide is now given to all new staff as part of their induction.

City improved its provisions around parental leave during this REF period, providing 20 weeks' full pay and a further 19 of statutory maternity pay, plus **return-to-work** bonus payments. At Department level, line managers are encouraged to meet with staff who are about to go on leave and just before their return to offer guidance and support. Policy dictates a return-to-work meeting during one of ten paid Keeping in Touch days, and discussions around managing workload expectations are proactively supported using guidance from the School's HR manager. Similar supportive arrangements apply when individuals return from periods of ill health or dependent leave. Furthermore, a recently introduced City policy for research-excellent returners entitles staff whose academic contribution indicates a trajectory of 3–4* outputs to take an additional term's leave to focus on research.

Mechanisms taking account of parental leave and part-time working are also embedded in **promotion criteria** to avoid subjectivity and bias – for example, the aforementioned ARQM scores embed discounts to the expected number of outputs according to REF norms. Financial support, mandated by School policy, exists for staff members who have accrued additional childcare (or other caring or health-related) costs due to **attending research conferences** and/or training-related activities; it can be claimed via the Department's Research Committee. More generally, the University, School and Department see staff and research-student **wellbeing** as one of their key responsibilities. Local activities (e.g., the School's Family and Friends Fun Day and regular Croissant Mornings, and the weekly mindfulness drop-in sessions organised by our own Centre for Excellence in Mindfulness Research) supplement the University's staff counselling service (by self or line-manager referral) along with workshops, courses and programmes to support wellbeing.

2.3 Research students

Alongside our thriving community of 88 professional doctorate students, at 31.07.20 there were 16 full-time and 13 part-time PhD students registered in the Department (i.e. around 0.75 PhD and 2.25 DPsychs registered per R&E staff member). The 41 PhD students who have completed since REF 2014 continue our upward trajectory across REF periods (2008 = 18, 2014 = 27). Moreover, we have awarded over 250 DPsych awards (mainly in Counselling Psychology). A continuing healthy cohort of research students is the bedrock of our sustainability strategy: supervising them enables research outputs and helps to build the next generation of research-excellent scientists. To this end, research groups are encouraged to develop taught master's courses (see Section 1), which can **identify potential doctoral students**. We currently offer five MSc courses: Research Methods with Psychology; Clinical, Social and Cognitive Neuroscience; Behavioural Economics; Organisational Psychology; and Counselling Psychology. These help us to identify and recruit exceptional talent from City's diverse intake of students based on both academic excellence and fit with an appropriate supervisor, with students situated within concentric research communities (their supervisor, their research grouping and the wider doctoral cohort). These support networks are reinforced through appropriate office arrangements (e.g., shared offices for students in the Autism Research Group).

Because graduate research students are so integral to the research life of the Department, we provide internal resources via **Department, School and University studentships**. At least 15 full studentships or fee waivers have been awarded since 2014, supplemented via City's alumni networks (e.g., a fee waiver studentship from the Worshipful Company of Saddlers). **We also pursue and attain external funds** in order to both build research links and finance our students (at least six such full studentships since 2014 from the Leverhulme Trust, Mental Health Research UK, the MRC, Oakam, the Office of Naval Research Global, and the US Air Force). Finally, we leverage our international reputation to attract PhD students for shorter periods (e.g., one-year Erasmus visits) and have recently established and formalised a **joint international PhD programme** (with Sapienza University of Rome) supported by Italian ministry funds, which currently funds two students. We also encourage student grant capture as part of their training (e.g., Macchia's £5k grant from the South East Network for Social Sciences).

PhD students are always assigned a second supervisor, and the **quality of ongoing supervision** is ensured via a web-based system used to record research meetings, known as Research and Progress. **Students' research skills are developed** through access to modules from our MSc Research Methods with Psychology programme, which includes training in data analysis using both MATLAB and R, and sessions on techniques ranging from eye-tracking to brain stimulation. Students can also register for modules within the School's more general MSc Research Methods programme, which provides a wider lens on social-scientific research practices. Students are encouraged to attend such modules and have also had access to central training and development events, which formed part of the Research and Enterprise Development Programme. This includes events tailored specifically to research students, such as the annual Researchers' Symposium, where doctoral students present their work through posters and papers. Since City joined the University of London, students have also gained access to the cross-institutional Bloomsbury Postgraduate Skills Network.

As outlined in REF5a, wider PhD training is now coordinated centrally through City Doctoral College. Alongside other training opportunities, PhD students who teach complete the Learning, Teaching and Assessment module from City's MA Academic Practice (with attendance mandatory, but paid, since 2018). At the Department level, a graduate research-student seminar runs fortnightly, and annual graduate research-student review days provide a forum where all students present a summary of the year's work to their fellow students and to other members of the Department, informing the upgrade process from MPhil to PhD. These requirements give students experience of presenting their work orally and an opportunity to receive constructive feedback. This practice is also reinforced by the policy of fully funding each student to attend one international conference, provided they are presenting. **Our PhD training is effective:** while our students pursue PhDs in psychology for varied reasons, often going on to applied positions, a significant proportion (at least 17 of those graduating since 2014) have attained post-docs and/or lectureships, often at prestigious national (e.g., Imperial, King's College London's Institute of Psychiatry, University College London (UCL)) or international (e.g., Brown University) institutions.

Our DPsych programmes are somewhat distinct from the PhD programme and include compulsory structured taught and training components (e.g., clinical leadership workshops) along with appropriate supervision arrangements to meet the research and professional needs of the students and professional accreditation bodies. The work of these students contributes to our research portfolio and provides further links to practising psychologists, forming a natural network for the promotion of impact activities and service-user engagement. Indeed, since 2019 the DPsych Research in Action conference includes service-users, who contribute to the design, evaluation and dissemination of research. Just as for PhDs, the final DPsych assessment is by individual viva voce with at least two examiners, including one external to the University. Annual review arrangements are in place for both the DPsych and the PhD programmes.

3. Income, infrastructure and facilities

3.1 Income

During this REF period, our **research income** from external grants was £2.63m, compared to £1.03m at REF 2014, representing a 155% increase. This steady growth in funding appears highly sustainable going forward: our staff won external awards worth around £2.9m during this assessment period, rising from approximately £1.9m during REF 2014. There is wide staff engagement in grant capture, with over half our submitted staff contributing to successful external applications during this cycle. Our overall grant success rate (around 23%) is solid, given the highly competitive funding environment, but improving this success rate is something we prioritise. We do so by using the Worktribe grant management system and the support of our active research officers, in order to create a culture of supportive peer review – our workflow ensures that all applications are reviewed internally, with the extent of that review process reflecting the size of the grant. The policy also incorporates flexibility to recognise the wider collaborative support networks used by many staff.

In addition to a large central Research and Enterprise Office, our staff (who comprise around a quarter of the School) enjoy ready access to SASS's four-person R&E team, who specialise in

research support as well as impact and business development. Their activities include targeted cascading of relevant grant calls. Research staff motivation is further enhanced through the provision of a substantial research sustainability account, valued at 8% of grant income plus one third of the full economic cost funding specifically received for PI time. These funds can be used to purchase equipment but also (for example) to fund participant payments or bridge RAs in order to maintain research in the periods between successful grant bids. These sustainability funds reward grant success and provide enhanced autonomy for those who achieve it, but are supplemented (for all academic staff) by the Department's Research Committee (see Sections 1 and 2) which regularly funds participant costs.

Our staff have attained funding from numerous sources during this REF period, at international (e.g., NIH), European (e.g., ERC) and UK (e.g., ESRC) levels. In addition to public research organisations, we have attracted funding from learned societies (e.g., the British Academy), charities (e.g., the Leverhulme Trust), industry (e.g., Thomas International Ltd) and the armed forces (e.g., the Office of Naval Research). Awards won during this REF period include Knott's three-year ESRC grant (£352k) to examine emotion-specific memories; Ayton's two-year investigation of institutional investors' decision-making, funded by the Institute and Faculty of Actuaries (£221k); and Yarrow's three-year Leverhulme Trust project grant to investigate speeded decision-making (£216k). At 31st July 2020, live applications for research funding had a total value of around £2.3m. **Our external funding is directly linked to our outputs and impacts.** For example, Pothos and Yearsley's output "The Rational Status of Quantum Cognition" (*Journal of Experimental Psychology: General*, 2017) was funded by a £112k Leverhulme Trust award to Pothos, while Flaxman's impact case study was supported by grants including £10k from the British Academy to address psychological health in schoolteachers.

3.2 Infrastructure and facilities

The University, School and Department have all made substantial **internal investments** during this REF period (over and above direct external grant purchases) to ensure that our facilities remain cutting edge. In 2018/19, a major redevelopment brought all psychology labs within our core facility (the modern Rhind Building, which is **fully wheelchair accessible**) alongside a considerable expansion of space and facilities. The lower ground and ground floors of the Rhind Building were **fully repurposed at a cost of £832k**, providing 68.4m² of new lab space (35.5m² of specialist labs, including a third EEG lab, plus 27.9m² of large multipurpose labs and 5m² of additional general-purpose cubicles). Labs undergo continuous updates to their computer equipment, including E-Prime and MATLAB software for experimental control. We continue to maintain software licences supporting online research, for example the popular Qualtrics survey software, and also house a psychometrics library. We seek central University funds for specific equipment needs via business cases. For example, in 2016, our transcranial magnetic stimulation lab saw a £66k investment, including new stereotactic guidance kit, booster modules permitting the full range of rTMS and patterned TMS protocols, and a specialist psychophysics screen. Similarly, in 2017, the University invested £18k in the purchase of a new BioNomadix psychophysiology recording suite for the recording and analysis of physiological signals such as heart rate, breathing rate and muscle tension. A subsequent business case saw the £15k purchase of a data-tracking system called Pragmatic Tracker.

These facilities are maintained by **two centrally funded full-time programming/technical support staff** (a 100% increase in technical FTE specifically attached to the Department of Psychology since REF 2014), who actively facilitate the full range of research we undertake (e.g., by programming experiments, engineering bespoke electronic peripherals, and managing our SONA participant recruitment system). We also enjoy access to the library and wider facilities outlined in REF5a.

All full-time PhD students are provided with their own desk, bookshelves and filing-cabinet space in a shared office. Each student has their own networked PC with statistical, word-processing and bibliographic software, and email and internet access. There is a shared telephone. Each student also has access to £1k to cover incidental costs connected with their research, such as participant expenses and the purchase of equipment and test materials. If further needs arise, applications can be made to the Department's Research Committee for additional support.

Table 1 shows our current dedicated laboratory facilities. Although some labs are designated as specialist facilities (in which case particular members of staff act as managers and primary users), **all staff can make use of all of our facilities**, which promotes a culture of collegiality and collaboration.

Table 1. City Psychology Department's dedicated research facilities.

Location	Primary Group	Name	Further Details
Lower ground floor	CNRU	Cognitive Genetics Lab	Phlebotomy lab supporting genetic assays
	CNRU	Belief Formation Lab	Three computers for experimental work
	Decision-Making	Cognitive Science Lab #1	Flexible layout for decision-making work
	Decision-Making	Cognitive Science Lab #2	Two touchscreens with high-temporal-precision Linux setups for psychophysical testing; one high-performance analysis workstation
	General use	Cubicle Cluster #1	Two sound-proofed testing cubicles
Ground floor	CNRU	EEG1	64-channel active EEG housed in a Faraday cage with a associated preparation area; specialised visual psychophysics test equipment
	CNRU	TMS Lab	MRI-guided TMS kit with extensive support for psychophysical testing and physiological recording
	CMN&P	EEG2	96-channel active EEG system with associated preparation area

Second floor	Centre for Excellence in Mindfulness Research	Eating Behaviour Lab	Behavioural lab incorporating food preparation facilities
	Autism Research Group	Autism Research Group Testing Suite	Three labs, two connected by a one-way mirror, incorporating two eye-trackers and extensive psychophysiological recording equipment (EMG, GSR, ECG etc.)
	General Use	Cubicle Cluster #2	Five sound-proofed testing cubicles
	Human Memory	Cognition & Development Centre	Reception area, adult testing room (three workstations), two baby booths (one Kemler Nelson head-turn preference setup, one multi-screen setup) plus a play observation room, all interfaced into a central control room
	Centre for Psychological Wellbeing & Neuroscience	EEG3	64-channel EEG housed in a Faraday cage with associated preparation areas and specialist peripherals for tactile stimulation
	CNRU	Action Observation Lab	Workstations plus head-mounted eye-tracking equipment
	Decision-Making	Cognitive Science Lab #3	Flexible layout for individual and group decision-making work
	CNRU	Brain Stimulation & Audiovisual Psychophysics Lab	tDCS/tACS stimulators, audiovisual psychophysics kit, and signal verification hardware (e.g., oscilloscope, light meter, sound meter)
	General Use	Eye-Tracking Lab	Tobii Eye Tracker interfaced with multiple interchangeable rigs for experimental control
	General Use	General Labs 1 & 2	Flexible layouts; wearable/portable Actiheart monitors
Fourth floor	General Use	Cubicle Cluster #3	Five sound-proofed testing cubicles
	CMN&P: Centre for Mathematical Neuroscience & Psychology; CNRU: Cognitive Science Research Unit		

In addition to our dedicated lab spaces, we enjoy priority access to the computer lab located on the fifth floor of Rhind, with approximately 40 networked PCs equipped with both E-Prime and MATLAB and serving both teaching and research purposes. Staff can also access central facilities including a large multicore cluster for parallel computing, which supports our computational modelling work. In general, the provision of physical laboratory space (24 separate rooms plus 12 cubicles), testing PCs and specialised equipment ensures that our research groups are well provisioned to carry out their research. Moreover, the design of our dedicated research space is mindful of the supportive role that our labs can play in allowing our staff to **engage with stakeholders and develop impact** – for example, the Autism Research Group's coordinated testing suite permits cutting-edge research while conveying a sense of critical mass and team-level expertise to their many visitors.

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

4.1 Collaboration

The Department is built around the energy and commitment of our staff, who have either already achieved or actively aspire towards leadership in their fields. As outlined in Section 1, intra-institutional collaboration is the norm (e.g., the School of Health Science's use of Flaxman's Acceptance Commitment Training with nursing students transitioning into roles at Barts Health NHS Trust, funded by the Burdett Trust for Nursing). Looking beyond City, our researchers are highly active on the national and international scenes, with collaborative work scaffolded by our generous sabbatical and conference-funding policies and by our willingness to fund invited speakers at our external seminar programme (among other mechanisms; see Section 2). The vast majority of staff (95%) report **national or international collaborations** yielding grants or papers during this REF period, with a mean of around four such collaborations. Examples and their outcomes include:

- Howe's collaboration with Henry Otgaar at Maastricht University (co-supervision of PhD/MSc students and at least 40 peer-reviewed publications since 2014)
- Rigoli's collaboration with Raymond Dolan at UCL (a British Academy grant and 16 publications since 2014)
- Ayton's collaborations with groupings coordinated by King's College and the University of Leicester (co-investigator on two grants each in the region of £1m)
- Yarrow's collaboration with Derek Arnold at the University of Queensland (six publications, and partner investigator on Australian Research Council Discovery Grants worth AU\$163k and AU\$199k).

Strong collaborative links are also evident in our development of impact, to which we turn next.

4.2 Impact development and wider contributions to the economy and society

Many of our staff balance their basic research with a strong commitment to the development of **societally meaningful impact engaging diverse communities**. Some of this work is showcased in our impact case studies, which demonstrate how we have improved the functioning of key UK institutions (such as national government and the NHS) and enhanced mental health across a range of UK and international organisations. This material is not repeated

here, but many further examples can be garnered from this REF period. Examples include Corr's collaboration with the Business School's Centre for Charity Effectiveness, working with Aberdeen Standard Capital to yield important guidelines for charities hoping to make effective financial investments. In this vein, we often use the esteem generated through our research to leverage subsequent impact. This is sometimes achieved through consultancy, e.g.:

- Tapper's work for the Shoreditch Trust (on the evaluation of an intervention programme for pregnant women with complex needs) and Saatchi & Saatchi (on the development of their campaign for Weight Watchers)
- Zibarras' work for Oakam (developing alternative psychology-based methods of evaluating traditionally unscorable credit consumers and improving their financial resilience).

We also look to commercialise our work in the public interest, e.g.:

- Reimers' development of the Quodl smartphone app for the higher-education sector (gamifying the learning experience to improve student retention)
- Corr's behavioural economics spinout company, Behavioural Fusion, to which Plagnol and Reimers also contribute.

Unpaid advisory positions offer a related pathway to impact, with our research centres acting as a focus, e.g.:

- Tobias-Mortlock's many invited speeches, including one at the Mindfulness All Party Parliamentary Group hearing on the Armed Forces, Policing and Emergency Services, which led to her appointment to the Naval Service Mental Health Steering Group. She also advises the Mindfulness Initiative, a UK think tank dedicated to investigating the benefits, opportunities and challenges of bringing mindfulness training into public life.
- Edginton's presentation on mindfulness in ageing and dementia at a parliamentary briefing in 2019. She also sits on the advisory board of the charity Shine.

Our staff also advocate through policy papers and trade conferences, and influence professionals, e.g.:

- Ayton gave the keynote at the 2019 Australasian Actuarial Education and Research Symposium and has had his research cited in the Institute and Faculty of Actuaries' reply to a recent consultation invited by the UK Pensions Regulator
- Plagnol collaborated with the European Trade Union Institute for Research, yielding both an academic publication and a policy brief to the EU
- Reimers gave an invited keynote at Finance@Google 2018, presenting behavioural science to financial sector digital marketers, and presents the Guardian Masterclass on making better financial decisions
- Howe and Knott were invited to present "The Science of Memory and Its Impact on Legal Proceedings" to Mishcon de Reya, one of the largest litigation law firms in the UK, while Conway delivered a keynote address titled "Memory and the Law" to Combar (the commercial bar association's) North American Meeting in 2019.

We also target specific user groups directly, through both professional society publications (e.g., Zibarras' publications in *Medical Education*, the journal of the Association for the Study of Medical Education) and print media (e.g., Tobias-Mortlock's 2019 practitioner report titled *Mindfulness in the Military*).

Another route to engaging end users, which has been particularly supported by the School's Business Development Manager, has been to organise and host workshops and related public events, such as the launches of our various new research centres (see Section 1). These are often followed up via the development of targeted lay guides, such as Gaigg's "Evidence Based Guide to Anxiety in Autism" (initially launched in April 2019 in West Sussex, where 1,500 hard copies were distributed to all 500 primary and secondary schools to support staff development, and now widely available online, with over 6,000 downloads as of March 2020).

Sometimes, we explain our science directly to the public, e.g.:

- Dima's installation (*Illusions: A Window to Your Brain*) with glass artist Dr Shelley James (Paths to Utopia Exhibition at Somerset House, 2016)
- Edginton's contribution to the "Me, Human" Science Museum residency.

Our work also inspires people, as when Calvo-Merino's research into experimental aesthetics with the London dance community (initially as participants) resulted in a production by Jack Philp Dance motivated by the dancers' interaction with her research (*Psychoacoustic*, presented for the first time in January 2016 at The Place, London).

Finally, we achieve impact through providing specialist expertise to well-placed external partners, as in Yarrow's ongoing collaboration with Kate Mandeville (World Bank and London School of Hygiene and Tropical Medicine). This yielded eye-tracking research that fed into the government-commissioned Stirling Review of the evidence on plain tobacco packaging (itself the major evidence for the Chantler Review, a report to Parliament that presaged the government's decision to legislate on this issue). More recently, these authors' 2019 *BMJ* paper led directly to an improved conflict-of-interest policy at NICE, increasing transparency and supporting vital decision-making regarding the health technologies (e.g., drugs) that the NHS adopts.

4.3 Contributions to the sustainability of the discipline and indicators of wider influence and recognition

Our staff are highly collegiate at a trans-institutional level, recognising and engaging in the (often unheralded) scholarly chores that sustain the quality of national and international systems of research. **We are committed reviewers**; all our staff report reviewing, typically for multiple journals, during this REF period, and it was clear from these reports that we are both sought out by the most competitive journals and willing to pay our dues by engaging constructively with the bulk of research of a more variable quality submitted to less prestigious outlets. For staff with a Publons profile, verified review activity in the past 12 months was on average at the 81st percentile (assessed at 6th February 2020). We also engage reciprocally with the wider community as examiners, with staff reporting completing a mean of 2.1 external PhD examinations each since 2014. **We are responsive to national and international funding initiatives**, often advertised via targeted email cascades originating from University and School

research administrators. For example, Gaigg's £126k Autistica grant was a response to a specific call to improve understanding of underrepresented groups of autistic individuals.

Our staff manage the dissemination of knowledge effectively: several staff have founded and/or acted as **Chief Editor** of journals since 2014, e.g., Conway and Howe, Chief Editors at *Memory* (Taylor & Francis); Corr, Founder and Chief Editor at *Personality Neuroscience* (Cambridge University Press); and Gaigg, Editor in Chief at *Research in Autism Spectrum Disorders* (Elsevier). A further 11 of our staff act or have acted as **Associate Editors or Editorial Board Members** in this REF cycle, and several have served on conference organising committees (e.g., Forster for the British Association for Cognitive Neuroscience). We review at all stages of the research pipeline, with staff reporting, for example, well over 100 collective **reviews for funding agencies** including the BBSRC, the EPSRC, the ESRC, the Leverhulme Trust, the MRC, the NIHR, Wellcome and agencies from at least nine further countries. Our staff also act as **grant-awarding panel members** and as working-group chairs, steering grant-making policy (e.g., Bowler and Gaigg, respectively, for Autistica UK).

Our staff are highly visible to both academics and the public. That they are held in esteem by the wider academic community is evident in various ways. Several staff report one or more **invited academic keynotes** since 2014, e.g.:

- Calvo-Merino's talk at the 2018 International Association of Empirical Aesthetics Congress (2018), where she received the Alexander Gottlieb Baumgarten Award for Outstanding Contributions of Young Scientists
- Hampton's speech to the Italian Association of Cognitive Sciences (2014)
- Pinotsis' presentation at the Krembil Institute's Canadian Computational Neuroscience Spotlight (2020).
- Pothos' Winer Memorial Lecture (Purdue University, 2014)
- Tapper's address to the 43rd annual meeting of the British Feeding and Drinking Group (Swansea, 2019)
- Willig's speech at Qualitative Research on Mental Health 7 (Berlin, 2018)

We are also **academic leaders** (e.g., Corr's 2017 presidency of the International Society for the Study of Individual Differences) and **award winners** (e.g., Calvo-Merino's Early Career Award from the British Association of Cognitive Neuroscience; Conway's Lifetime Achievement Award from the Research Board of the BPS; and Willig's BPS Qualitative Methods in Psychology Section's Lifetime Achievement and Contribution to Qualitative Methods researcher prize). We also support the discipline more broadly by taking key organisational roles at a variety of learned societies (e.g., Knott's position as Honorary Secretary to the BPS Cognitive Section (2015–2017) and Mahmood's role as Social Media Manager for the Association for Business Psychology).

Staff visibility is also evident through interactions with the press, who regularly cover our research or seek our commentary and expertise. We are sought out for public information programming (e.g., Tapper's collaboration with the BBC's *Trust Me, I'm a Doctor* programme to run a study on mindful eating). Our staff commentate for lifestyle and news outlets (e.g., Ayton's frequent discussant roles for BBC Radio 4). Our research is often picked up by the mainstream press (e.g., the reporting of Freeman's 2017 and 2019 work on the "visual ear" in at least 25

news outlets including *The Guardian*, *The Metro* and the *New York Times*). It is also blogged and tweeted about, and shared widely: a review of Altmetric data for our submitted outputs (completed 11th February 2021) showed that they had received median attention scores at the 86th percentile compared to outputs of the same age.

In sum, we are demonstrably collaborative, impactful, conscientious and visible – we are proud of our achievements since 2014 and we look forward with confidence to the next REF cycle.