Institution: London School of Economics and Political Science

Unit of Assessment: 30: Philosophy

1. Unit context and structure, research and impact strategy

1.1 Introduction

"LSE Philosophy Unit" (LPU) comprises the *Department of Philosophy, Logic and Scientific Method* ("Department"), the *Centre for Philosophy of Natural and the Social Science* ("Centre") and the *Forum for Philosophy* ("Forum"). LPU focusses on producing world-leading research and impact in the areas of philosophy of science, rationality and choice, and moral and political philosophy. It operates within a specialist social science HEI and aims to influence the practice of science based on philosophical insights. The three constituents of LPU are located in the same building and work in close collaboration. The Department provides for teaching and employs a group of leading academics. The Centre houses 25 research projects, runs a visitor programme, and organises research related events. The Forum runs an active public engagement programme. Together, the Department, the Centre and the Forum form a symbiotic entity working towards the goal of delivering top-quality independent research that provides critical analyses of current problems and that leads to interventions in policy and the economy.

On 31 July 2020, LPU employed 20 REF-eligible staff (17.50 FTE), one Visiting Professor in Practice, and nine professional service staff of which five were in the Department, two in the Centre, and two in the Forum. LPU also employed 12 REF-ineligible full-time staff and 24 registered PhD Students. Additionally, the Centre hosts a number of postdoctoral researchers on personal grants (see Section 3.1).

All members of the Department are actively encouraged to lead, or be involved in, research projects in the Centre and thereby benefit from the Centre's research infrastructure. Approximately half the members of department are currently involved in Centre projects: nine of the 25 Centre projects have an involvement of members of the Department. The Centre Director and the Forum Deputy Director are also members of the department. Centre projects also involve members of staff from other academic units at LSE as well as from outside LSE, and the projects play a significant role in fostering interdisciplinary collaborations. Centre projects involve colleagues from the departments of Accounting, Economics, Grantham Institute on Climate Change and the Environment, Government, International Development, Management, Social Policy, and Statistics within LSE. From outside LSE, Centre projects involve active researchers from a wide range of disciplines including biological Sciences (Royal Holloway, The Open University of Israel); Computer Science (University of Hertfordshire); Economics and Management (École Normale Supérieure de Cachan, Open University, Université de Caen-Basse-Normandie); Education (University of Bath), Mathematics (University of Augsburg), Science & Technology (University of Middlesex), Philosophy (Open University, Ca' Foscari University of Venice, King's College London), Political Science (University of Maryland Baltimore County) and Psychology (University of Cambridge). We also collaborate with the Cohn Institute for the History and Philosophy of Science and Ideas in Tel-Aviv, CNRS Paris, Comparative Cognition Lab (University of Cambridge), Duke Law School, Herman Deleeck Centre for Social Policy (University of Antwerp), Munich Centre for Mathematical Philosophy (LMU), Museum Ethnography (University of Oxford), NICE, Paris School of Economics, Psychological Horizons, and School of Political Sciences (University of Haifa).

1.2 Research Objectives August 2013 - July 2020

The objectives LPU formulated in REF2014 fell into two broad categories: intellectual and performance.

The intellectual objectives were to (a) strengthen the philosophy of public policy; (b) build philosophy of biology and cognitive science; and (c) develop existing strengths. LPU has made significant progress against these objectives:

(a) We hired five permanent full-time faculty in philosophy of public policy (Bright, Brown, Burri, Parry, and Thoma) and increased List's FTE from 0.5 to 1, while only losing three (Bovens, Steele, and Wollner). This constitutes a net increase of 2.5 FTE in the field. The Centre started five new research projects in the area.

(b) The Department hired Birch, an expert in the philosophy of biology and cognitive science, as a permanent full-time member of staff, and it created two LSE Fellow positions in the subject area. The Centre initiated six new projects in the field.

(c) The Department hired Hudetz (philosophy of science) and Mahtani (formal epistemology) as permanent members of staff. The Department also created two LSE Fellow positions in the areas of general philosophy of science and philosophy of physics respectively. The Centre added seven new projects in existing subject areas to its portfolio.

The performance objectives were to (i) complement existing expertise within philosophy with collaborations *outside* philosophy; (ii) influencing the practice of science based on philosophical insights; (iii) increase impact of LPU's philosophical work on the social reality outside academia through influencing decision-makers both in government and in the private sector; and (iv) increase engagement with interested members of the public. LPU successfully met all objectives:

(i) & (ii) Since August 2013, LPU has established a wide network of *new* collaborators for interdisciplinary research. This network consists of 49 institutions and includes bodies as diverse as the Harvard Law School, the Wellcome Trust Center for Neuroimaging, the Department of Economics at the University of Zambia, the Alan Turing Institute, Department of Physics Pennsylvania State University, the Cancer and Surgery Unit at Imperial College London, the Institut Jean Nicod, the Fujita Health University, and the Woodrow Wilson School of Public Policy at Princeton.

(iii) LPU has exerted influence on social reality outside academia through the work documented in our two ICSs and through numerous projects addressing issues ranging from fair pay to welfare policy, from cultural inclusion of disabled people to robust methods for the life sciences, and from animal rights to the treatment of dementia (for details see Section 4.2).

(iv) The Forum runs what is widely considered the largest and most successful outreach and public engagement programme for philosophy in the UK (for details see Section 4.3). Members of LPU also engage with the general public through the LSE Philosophy Blog, where they discuss their research in ways that make it accessible to the general public. Colleagues contribute to other blogs (e.g. Bright maintains his own blog; Ferretti writes for Justice Everywhere; Parry founded the Ethical War Blog, recently renamed as Public Ethics), media appearances (e.g. Bright and Worrall were on In Our Time), public lectures outside the academic context (e.g. Ferretti spoke at the Human Rights League; Mahtani and Thoma gave lectures for A-Level and GCSE students), involvement in charitable activities (e.g. Birch works with the New Note Orchestra, a programme for recovering addicts; Gobet is on the advisory board of the Education Commission of the European Chess Union), and through publications in non-academic venues such as The Atlantic, Aeon, The Critique and The Conversation.

1.3 Impact Facilitation August 2013 - July 2020

LPU's impact strategy was to influence policy-making and the economy. It has facilitated major research impacts in the areas of health policy and natural catastrophe insurance, which are documented in the two ICSs that form part of LPU's REF2021 submission. The strategy also produced significant impact beyond its ICSs; this is documented in Section 4.2.

Knowledge exchange activities are promoted as good practice and impacts from research are rewarded through the Department's work allocation point system (more about rewards in Section 2.1). The School also provides central support through the LSE Impact Fund, which awarded a £9k grant to Voorhoeve for work with the World Health Organization, which is the subject of the first the two submitted ICSs of the UoA. Voorhoeve's arguments for a pluralist egalitarian view of distributive justice have shaped a landmark report by the WHO Consultative Group on Equity and Universal Health Coverage, which has been used to guide health resource allocation in many countries.

A crucial instrument for generating impact are the research projects located in the Centre. LPU strongly encourages projects to have a "two-legged structure". The first leg consists of top-level academic research; the second leg consists of applications and impact. Projects are advised to have partners outside academia and to engage in knowledge exchange and impact activities. The Centre's infrastructure supports this actively through offering office space to projects. This space can also be used to accommodate impact partners from the private and public sectors. Several of our impact partners were Centre visitors, a status which gives them desk space in the Centre and access to all LSE facilities. Hausman, who helped shape Voorhoeve's work with WHO, was long-term visitor at CPNSS, and so were Philp of AXA XL, Hoffmann of Syntherion KIG, and Bank of England adviser Wong, who all collaborated with Bradley and Frigg on developing the UoA's second ICS. In this ICS they developed techniques to make confidence-sensitive decisions under uncertainty that are now used by insurance companies and risk-management providers. Having impact partners "in house" has proven crucial to the success of projects because it facilitates collaboration.

1.4 Research and Impact Strategy August 2020 - July 2025

In line with the LSE 2030 strategy, the core of LPU's research and impact strategy is to undertake original philosophical research that attains the highest international standards, to provide an excellent research-based education for students, to critically engage with social, political, and economical issues in which philosophical questions arise, and to be a driver of change in the socio-economic reality outside academia.

As regards research, we aim to achieve this goal by strengthening existing areas of research, by extending into new areas, and by strengthening and increasing our interdisciplinary connections and collaborations, particularly in relation to impact. This process will be supported by modest but strategic internal growth and through extending our externally funded research portfolio. While LPU will keep supporting all current areas of research, two of them are singled out for strategic development. The first is ethics and data science. The Department has just hired Vredenburgh, whose research focuses on ethical issues in data science with special focus on big data. She will build up a research group on data ethics that will be located within LSE's new *Data Science Institute*, which brings together research from all parts of the School. The second area of strategic development is the philosophy of biology and cognitive science, which will be expanded to also include philosophy of behavioural science. This will strengthen the current research and create synergies with decision science and public policy.

LPU's interdisciplinary and collaborative approach to research is key to its impact strategy. Building on existing networks, we will deepen and broaden our direct engagement with impact partners, and intensify our links with charities, corporate bodies, policy-makers, and stakeholders to inform their policies and practices. Current plans include achieving impacts in the following four areas:

(1) The policy and practice of animal sentience and animal welfare

Birch is leading a project for Defra, which involves advising on the scope and content of new laws relating to animal sentience in invertebrate animals. Separately, Birch's Foundations of Animal Sentience project, funded by a €1.5m ERC Starting Grant, involves working with animal welfare organisations, such as the RSPCA, to improve animal welfare legislation, policies and best-practice guidelines on a host of issues, including animals in science and farm animals.

Birch has also contributed to other consultations run by Defra, the Nuffield Council on Bioethics, and the Home Office's Animals in Science committee, and we expect this to develop into significant pathways to impact over the coming years.

(2) Commerce and the economy, with businesses being the beneficiaries

Bradley and Frigg, whose research underpins one of our ICSs, will continue to work with AXA XLC on managing uncertainty in the insurance sector. They have also just embarked on collaboration with Maximum Information, a start-up that aims to provide insurers with reliable information for policy pricing.

(3) Professional services and ethical practice, with both organisations and individuals being beneficiaries

Parry plans to write policy reports with the UK Faculty of Public Health and with Forceswatch. Voorhoeve will continue collaborating with policy-makers in the health sector. Vredenburgh is a Visiting Scientist on Facebook's Responsible AI team and has built up a considerable network of contacts in Silicon Valley which she will use in her work on data ethics.

(4) Social welfare, with groups of people and communities being the beneficiaries

A range of work continues in this area: Bright on demographics in philosophy, inter alia with the British Philosophical Association, to survey the present state of the field in the UK; Dahlsten's influence on trade policies and financial regulation; Hudetz' research on the methods and ethical implications of high-stakes decisions made with AI and machine learning models and Otsuka's work on USS pensions.

1.5 Research Ethics and Open Access

Members of LPU must comply with LSE's Code of Research Conduct and its Ethics Code (for details see REF5a). Members of staff and PhD students are offered training sessions in research ethics and integrity. All grant applications are first vetted by the LSE Philosophy Research Committee and then have to pass the School's ethics clearance (detailed in REF5a). LPU has contributed actively to research ethics in LSE by providing the chair of the LSE Research Ethics Committee (Worrall) from 2015 to 2018.

LPU actively promotes open access and encourages publication in open access outlets wherever possible, supported by funding from the Library. Members also deposit work in LSE Research Online, which has led to a 33% increase in the online availability of full-text versions of LPU's research outputs (48% in December 2014 to 81% in May 2020), making a total of 2,135 philosophy publications available.

Members of LPU are active in the open access movement. Bright's research advocates for open science practices. Roberts led the negotiation of a contract between the British Society for the Philosophy of Science (BSPS) and the University of Calgary Press which resulted in the launch of the first completely open access monograph series in philosophy of science in the summer of 2020. List is on the editorial board of the open access Stanford Encyclopedia of Philosophy, and several colleagues from LPU have contributed pieces to this and other open access reference works like the Internet Encyclopedia of Philosophy and the Open Handbook of Formal Epistemology.

LPU also maintains several blogs, makes available content through podcasts and videos, and has an active presence on social media platforms (Section 4.3).

2. People

2.1 Staffing Strategy and Staff Development

We conduct well-advertised international searches for all job openings, and hiring decisions are made by the entire department in dedicated recruitment meetings. By competing globally for the

best talent, the Department seeks to strengthen current areas, expand into new areas, and support its impact strategy.

During the current REF period, the Department hired Birch (PhD Cambridge), Bright (PhD Carnegie Mellon), Brown (PhD ANU), Burri (PhD University of London), Hudetz (PhD Salzburg), Mahtani (PhD Sheffield), Parry (PhD Sheffield), Thoma (PhD Toronto), and Vredenburgh (PhD Harvard) as permanent members of the department, and Backmann, Buskell, Chellappoo, Dyke, Easton, Gallotti, Gyenis, Hunter-Diamond, Ross, and Whiteley as LSE Fellows. To complement permanent staff, Ferretti and Griffiths were hired as Postdoctoral Fellows on Departmental core funding. The Centre hired Adler, Hausman, and Decancq as Lachmann Research Fellows, Gobet as Professorial Research Fellow, and Bartlett, Browning, Crump, Hosni, Javed, Krauss, Pirrone, and Salis as postdoctoral researchers on LSE-administered external funding. The Centre continues to host a considerable number of researchers on externally administered grants (Section 3.1). LPU takes a stand against "casualisation" and hires all non-permanent members of staff for at least two years, but most have contracts for three and some for four years.

The current constitution of LPU is: five Assistant Professors, five Associate Professors, seven Professors, two Professorial Research Fellows, one Visiting Professor in Practice, five LSE Fellows, seven postdoctoral researchers, seven researchers on external externally administered grant-funding, and nine professional service staff.

The success of our staffing strategy can be seen, for instance, from the fact that four Philip Leverhulme Prizes in philosophy were awarded to Assistant Professors in the Department (three of whom are now Associate Professors), more than were received by any other UK institution. Further indicators of success are discussed in Section 4.5.

LPU staff undergo regular career development reviews (CDRs), an official process overseen by LSE's HR division. Every member of staff has a mentor who conducts their CDR. Assistant Professors have a CDR annually; Associate Professors biennially; and Professors every three years. The CDR process first gathers information about the member's activities since their last CDR (publications, conferences, knowledge exchange, impact, teaching, and services to the School). Mentor and mentee discuss this information and the mentor provides honest and constructive feedback. Goals for the next period are formulated. The discussion and goals are recorded on a CDR form, which is reviewed by LSE's Pro-director for Faculty Development to ensure reviews are conducted properly and equitably.

The Department seeks to ensure fairness in review and promotion decisions. Every year all non-professorial members of staff are asked to submit their CV to the head of department. The entire professoriate then meets to discuss who is eligible for promotion the following year. Decisions are made on the basis of a clear and explicit set of criteria that have been agreed by the entire department and which is available to every member of staff. If a person is deemed ineligible for promotion, a clear reason is articulated and then communicated to them, with further support and advice provided to become eligible. Each colleague who was non-professor at the last REF had at least one promotion over the current REF period.

2.2 Early Career Researchers

With five Assistant Professors, five LSE Fellows and 14 postdoctoral researchers, early career researchers (ECRs) are an essential part of LPU. ECRs are closely integrated within LPU in line with The Concordat, and our ambition is to support the career development of researchers through the mechanism described in Section 2.1. ECRs hired through the department are invited to attend departmental meetings; and those hired through the Centre are full members of the Centre's management committee.

Assistant Professors are given a 25% reduction of workload in their first year. LSE Fellows are given reduced teaching loads (limited to a maximum of 120 contact hours per year) to ensure

that they have time to consolidate their research portfolios and to perfect their teaching. All members of staff receive research money they can spend on anything that supports their research. This contribution is higher for ECRs than for other members of staff (in 2020/21 each ERC received £1,470pa compared to £970pa for senior members).

2.3 Sabbatical Leave

LSE provides staff with one term of sabbatical leave for every eight terms of full-time teaching and service. Provisions are also made for teaching and associated duty buyouts up to a maximum of 40% of the normal load in any five-year period. Colleagues returning from a parental leave or long-term sick leave are entitled to a term of research leave upon returning.

Colleagues are actively encouraged to secure external funding for buyouts from teaching, to take research leave, visit other institutions, and undertake knowledge exchange activities. This also applies to part-time staff, whose entitlement is calculated pro rata. The Department endeavours to accommodate all requests for sabbatical or research buy-out and to be flexible with the term(s) taken off.

2.4 PhD Students

The MPhil/PhD programme provides broad, rigorous training in philosophy, and includes training in research methods and the teaching of philosophy. The programme benefits from LSE's dynamic research environment, enriched with research projects in the Centre and the Centre visitors programme (described in Sections 4.1-4.2). PhD students are fully integrated into the fabric of research networks and projects. Over the current REF period, PhD students co-authored 22 publications with a permanent member of the faculty (usually, but not always, one of their supervisors). PhD students are encouraged to publish in appropriate journals and frequently succeed, resulting in a further 45 publications in journals including *Philosophy of Science*, *Ethics*, and *Analysis*, either as single author or with co-authors who are not permanent members of the department.

PhD students actively shape research activities. There are two PhD-student-led seminar series, which are an integral part of LPU's busy events schedule. *Conjectures and Refutations*, a public research seminar, is organised autonomously by the Department's PhD students. It receives the same budget as all other seminar series in LPU. PhD students also organise their own work-in-progress seminar. Every year, the PhD students receive financial support from the Centre and the Department to organise an international student conference on a topic of their own choice. LPU co-organises the annual *LSE-Bayreuth Student Philosophy Conference.* PhD students write for the LSE's Philosophy blog, where their posts appear alongside the contributions of faculty. PhD students have developed a mentoring scheme in which more advanced students mentor incoming students; and they organise a yearly away day (financially supported by LSE) in which they discuss challenges facing aspiring professional philosophers.

The majority of PhD students are funded directly through LSE Studentships, which cover the cost of the PhD for four years including a maintenance grant of £18,000pa (irrespective of whether the students are home or overseas students). Since 2018, we have been part of the London Arts and Humanities Partnership, which awards AHRC funding to PhD projects across London. Starting in 2020-21, we will have a four-year scholarship for a female PhD student, funded by a philanthropic donation.

In the current REF period, we had a completion rate of 97%, with 31 PhD students successfully completing their PhDs. The Department has an excellent placement record: of the 25 students who graduated in the current REF period, 21 went on to academic positions (for instance in Stanford University, University of Oxford, University of Cambridge and the Santa Fe Institute), and four got jobs in the private sector.

The Department receives around 70 applications every year for 3-5 places. The Doctoral Programme Director makes a first selection, identifying candidates who meet our requirements, and then forwards these applications (around 30) to potential supervisors for review. This results in a shortlist of around 15 candidates, who will be interviewed by a committee of two members of department. The top 7-8 candidates receive an offer of admission, with a number of top applicants (usually 3-5) receiving LSE Studentships. Every incoming student is assigned two supervisors with whom they are expected to have at least two meetings per term; all meetings are recorded in a central system, where both the student and the supervisor record comments and agree on a work plan.

In the first year of the MPhil/PhD programme, students attend taught seminars and write essays, in addition to conducting research as part of developing their thesis proposal. At the end of the first year, there is a rigorous upgrade process. In the remaining three years, students research and write their thesis. During this period, they are required to begin each academic year by formulating or revising a Completion Plan for the remainder of their degree. At the end of each year, their progress is formally reviewed, and the student progresses to the next year only if their progress is satisfactory.

The ability to teach is crucial to succeed on the job market. For this reason, students typically also work as graduate teaching assistants (GTAs). A typical teaching load would involve teaching two or three undergraduate classes a week for two years during the second part of their PhD. They receive the support of the EDEN Centre for Educational Enhancement, and many GTAs take the opportunity to simultaneously obtain the Postgraduate Certificate in Higher Education.

Students are encouraged to submit papers to conferences, and many have presented their work internationally at major conferences in the field (PSA, EPSA, BSPS, SAP, etc.). If they have a paper accepted, the School and/or the Department supports their conference participation financially with up to £1,000 a year.

The Department actively prepares students for "life after LSE". The Department produced a detailed document entitled "Getting a Job as a Philosopher" and created the position of Placement Officer, who organises meetings to prepare students for the job market. For students in the fourth year, the faculty offer individual advice on job application materials and practice job talks and interviews. If a student decides on a non-academic career path, the LSE's Careers Service offers coaching and support for applications. The service remains available to students for up to five years after graduation.

2.5 Facilitation of Exchanges between Academia and Business

As noted in Section 1.3, staff are actively encouraged to undertake knowledge exchange activities and are supported in doing so through the Centre infrastructure, which hosts two-legged projects and accommodates impact partners from government, business, and industry. The Department operates a point system whereby members of the department get credit for the work they do for the department. Members of staff who actively engage in knowledge exchange activities are rewarded with departmental credit points. Six members of staff were awarded with such credits, among them those who produced the submitted case studies. In 2016, LPU also appointed Dahlsten, a former CEO of the Swedish Post and Advisor to the European Commission, as Visiting Professor in Practice to facilitate the exchange of knowledge between LPU and business.

2.6 Commitment to EDI

LPU's strength lies in the diversity of its staff and students, and it is investing in measures to advance diversity in recruitment and promote an inclusive staff experience. In 2015 an LSE-wide EDI Taskforce conducted a review of EDI issues, including gender pay and promotion gap. A number of measures have been implemented, among them adjustments to pay and the

introduction of mandatory unconscious bias training for all members of staff (see REF5a). LPU appointed an EDI Officer who oversees internal procedures, serves as a point of contact if someone has in issue, and chairs LPU's EDI committee. The committee's membership is constituted by the head of department and representatives of all levels and types of staff. LPU is in the process of applying for Athena SWAN to further its commitment to EDI.

In 2017 LPU produced a new Faculty Handbook to promote awareness of EDI issues and to record decisions taken on EDI issues, such as the processes put in place when we joined the UK Society for Women in Philosophy's "Good Practice Scheme". In 2018, we were the first department in the LSE to run a workplace climate survey with the aim of identifying EDI issues.

The Department's work allocation model ensures that all members of staff have the same workload. This calculation is available to all members of staff to ensure transparency and fairness. We seek to offer flexible working conditions to staff, particularly those with caring roles. In cases of illness or parenthood, members of staff are entitled to take leave, and our students are granted interruptions.

LPU is committed to EDI in recruitment. We ensure that all posts are advertised openly, and recruitment communications underline our commitment to EDI. We prefer to hire at the Assistant Professor level because the resulting pool of candidates exhibits greater diversity than at more senior levels. References are sought only after shortlisting to minimise bias.

Currently, 27% of LPU's REF-eligible staff and 25% of its non-REF-eligible staff are women. These percentages are still relatively low, but measures to improve them have had positive impact: 44% the permanent faculty and 30% of temporary research staff hired over the current REF period are women. We note that the under-representation of women is a sector-wide problem (the British Philosophical Association reports that 24% of permanent staff and 28% of temporary staff are women). 14% of LPU's REF-eligible staff self-identify as BAME. The American Philosophical Association finds that only 7.9% of philosophy PhDs were received by traditionally under-represented minorities, and so the figures in LPU are above sector norms.

Bright is actively researching the demographics in philosophy, with particular focus on BAME philosophers, in a project supported by the British Philosophical Association that hopes to find recipes to improve the EDI situation in philosophy.

The REF 2021 process has been undertaken with a view to ensuring fairness and equity in all facets. In the selection of its outputs portfolio, LPU followed LSE guidelines (see REF5a) and pursued the aim of producing a portfolio that is balanced in terms of outputs per author and takes into account the protected characteristics of submitted staff. The final submission was subject to two independent equality impact assessments (by the Department's EDI officer and by the School) to check for any equality bias with regard to protected characteristics and career stage as set out in the School's REF Code of Practice.

LPU champions inclusivity in the wider community by hosting scholars who work under challenging circumstances and find it difficult to get access to resources in their home countries (in the current REF period we hosted visitors from Algeria, Jordan, Turkey, India, and China). The Centre also participates the fellowship scheme of the European Philosophy of Science Association (EPSA), which provides junior philosophers working in Central and Eastern Europe with the opportunity to visit a leading research institution.

3. Income, infrastructure and facilities

3.1 Grants and Funding

LPU held prestigious (HESA returnable) grants during the current review period that are worth a total of £7.97m. In chronological order these are: Gods Order, Man's Order and the Order of Nature (Templeton Foundation, £1.64m), Managing Severe Uncertainty (AHRC, £725k),

Scientific Models, Fiction and Imagination (ERC, £152k), The Limits of the Sciences in Identifying Causes (ERC, £160k), Tsunami Risk for The Western Indian Ocean (NERC, £20k), Geometric Approaches to Representing the Observable (NSF, £18k), Rethinking Uncertainty: a Problem-Based Approach (ERC, £165k), Reasons, decisions and intentional agency (Leverhulme Trust, £175k), Knowledge for Use (ERC 66k), Foundations of Animal Sentience (ERC, £1.5m), Genetically Evolving Models in Science (ERC £2.2m), and Ethical and Responsible Autonomy (EPSRC, 1.15m). Of these grants, a total of £1.596m (up to the end of 2020) constituted HESA-eligible research income, noting that the Templeton grant ended in 2014 and that the two ERC grants and the EPSRC grant have just started.

Forty percent of grant overheads are allocated by the School to LPU, which generated an additional income of £87,608 in the current REF period. These overheads are allocated to the principal investigator(s), who have a choice of how to use these funds, which increases the flexibility, autonomy, and creativity of individual research decisions, creates an incentive for submitting bids, and potentially enhances impact in academic and practice communities.

Additionally, LPU held grants worth a total of £2.37m that are not returned to HESA, either because they are grants which are paid directly from the funding agencies to the researcher or because they are regarded as donations. Researchers on these grants were full members of LPU who had access to all LSE facilities including the Library and the LSE's IT network. The grants classified as donations are: three Phillip Leverhulme Prizes (£400k), British Psychological Society (£30k), and Alexander von Humboldt Foundation (£40k), Coombes Charitable Trust (£55k). The bursary grants are: Swedish Research Council (£170k), Norwegian Development Agency (£112k), Fonds de recherche du Québec – Société et culture (£97k), Swiss National Science Foundation (£57k), Swiss National Science Foundation (£25k), National Council for the Blind of Ireland (£10k), National Science Foundation (£35k), Chilean National Office for Science and Technology (£8k), Shanxi University Research Fund (£16k), The Scientific and Technological Research Council of Turkey (£8k), University of Ostrava Research Fund (£4k), Anglo-Czech Educational Fund (£7k), Frank Knox Memorial Foundation (£18k), German Research Foundation (£32k), Canadian Social Sciences and Humanities Research Council of Canada (£43k), Swiss National Science Foundation (£60k), Shanxi University Research Fund (£21k), Fonds de Recherche Societé et Culture Québec (£36k), Charlottenburg Trust (£238k), Swedish Research Council (£247k), Swedish Research Council (£305k), Government of Ireland (£128k), Swiss National Science Foundation (£114k), Swiss National Science Foundation (£39k), Institute for New Economic Thinking (£33k), China Scholarship Council (£3k), Kone Foundation (£37k), Japanese Ministry of Energy (£35k), Campus Hungary Programme (£5k), Anglo-Czech Educational Fund (£9k). Calculating these grants pro rata for the current REF period yields a total of £2.13m of research income not returned to HESA. Furthermore, we received £9k from the LSE Impact Fund for work with the World Health Organization.

In the current REF period LPU also received charitable donations totalling £1.86m from the Charlottenburg Trust (£1.27m), the Mizuho Bank Limited (£33k), and private donors to support the Forum (£560k).

There is a clear link between research funding, high-quality research, and impact. Both impact case studies submitted by LPU for this REF are based on work originating in the AHRC-funded Managing Severe Uncertainty project. About a third of our publications have been produced within funded research projects. Probably more important than this direct influence is the indirect influence via the research environment. LPU's grants allow it to host a large number of researchers, which creates a vibrant research environment that is conducive to writing top-level papers.

3.2 Infrastructure

LPU staff benefit from being part of a leading research institution, which provides top-level facilities including the British Library of Political and Economic Science, excellent IT support and web services, a central Research and Innovation Division with dedicate pre-award and post-

award teams, first-grade infrastructure with lecture theatres of all sizes, and central service divisions like HR and Finance that support the running of research projects (for details see REF5a). LPU also benefits from having the British Library, the KCL Library, and Senate House Library within walking distance.

All academic staff have a personal office. In addition to these offices, the Centre has around 200 square metres of office space, which is *solely* dedicated to research projects and academic visitors, as well as a dedicated seminar room. Our research students are closely integrated within the Department, occupying a well-kept working space with PC and printer facilities, and there is a common room with kitchen where all members of LPU socialise.

LPU has a rich operational infrastructure. One-to-one support is provided by an allocated Grant Applications Manager in LSE's Research and Innovation Division for expert guidance and advice on income generation, as well as provision of training related to grant-writing and management. Applicants who are invited for interviews receive interview training and are given mock interviews. All members of the Department are encouraged to run a research project through the Centre, which provides office space for the projects, project management for ongoing projects, and logistical support for the project's events. The Centre also makes available small grants for events (workshops, seminars, public lectures): all members of LPU are encouraged to apply and they can use the Centre's infrastructure, in particular its seminar room, for events.

There are four permanent seminar series, covering different interests: Popper seminar, Choice Group, Sigma Club, and Conjectures & Refutations. We have extensive Mailchimp lists and social media presence to advertise seminars, which are open to everybody. The Assistant Professors in the department run a work-in-progress seminar, where they discuss their own work. As documented in Section 4.3, LPU maintains an array of blogs and social media channels managed by a full-time media and communications manager. The LSE Library hosts the Lakatos Collection (a large collection of philosophy of science books) and the Lakatos Archive.

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

4.1 Research Collaborations and Networks

The Centre is LPU's instrument to initiate and maintain research networks and nurture collaborations. The Centre is currently home to 25 active research projects that involve over 100 researchers from all over the world (see Section 1.1). Between August 2013 and July 2020, the activities of these projects generated 91 international workshops and conferences and around 50 seminar talks every year. The Centre also hosts the editorial office of BJPS.

A crucial instrument in the building and maintenance of networks is the Centre's visitors programme. A substantive portion of its office space is reserved for this programme, allowing it to host up to 18 visitors at any given time. Between 40 and 50 scholars from all over the world visit the Centre every year, with visits lasting from a few weeks to an entire year.

4.2 Interdisciplinary Research and Impact Beyond Submitted ICSs

Members of the LPU engaged in numerous research projects with collaborators outside philosophy and with the aim of having a positive influence beyond academia. Some of this work is documented in our two ICSs; this section describes impact work beyond our ICSs.

LPU colleagues have contributed actively to the debate about adequate policy responses to the COVID-19 crisis. Adler, Bradley, and Voorhoeve were co-authors of a major report on lives versus livelihoods for T20 (the think tank accompanying the recent G20 summit in Saudi Arabia). The World Health Organisation commissioned a paper concerning transparent and inclusive decision-making from Bright, Voorhoeve, et al., which was first published on the WHO website and then appeared in Nature Medicine (December 2020): "Sustaining Lives and Livelihoods: A

Decision Framework for Calibrating Social and Movement Measures During the COVID-19 Pandemic". Adler, Bright, Birch, Bradley, and Voorhoeve contributed blog posts on COVID-19.

Otsuka's research on pensions gave rise to a critique of Test 1 modelling of an acceptable level of risk, which elicited two extended responses from USS and prompted Oxford and Cambridge to accept the level of risk proposed by USS. Otsuka's blog posts made him one of the most influential contributors to debates about USS and led to his nomination as one of three finalists in Wonkhe's "Wonk of the Year" award which noted that "it is no exaggeration to say his blog posts changed the course of the dispute". He was ranked 23rd on the Higher Education Power List 2018.

Birch has conducted research into the ethical implications of animal sentience and pushed for humane slaughter regulations to be amended to include crabs and lobsters. Birch collaborates with several animal welfare organisations about the topic, and the UK Government announced that it was consulting on a change to the regulation.

Bradley collaborated with Guillas and Cassidy at UCL on damage done by tsunamis, and their work had influence on tsunami planning in Navi Mumbai and Kochi, through their cooperation with the Indian Institute for Human Settlement which provides consultancy services for town planners.

Burri collaborated with the UK Reward Practice team of PwC on a study into high-level executives' attitude to pay. Together with Pepper from LSE's Department of Management, Burri investigated distributive justice in this context, and PwC now use their research to advise companies on how to structure their executive pay in a fair and transparent way.

The Project Sensory Impairment and Cultural Inclusion, led by Hayhoe, studies how epistemologies affect disabled identities with the aim of countering the exclusion of people with sensory impairments and learning difficulties from culture and education. It supports projects in the US, the UK, the Republic of Ireland, Turkey, Russia, Mexico, Spain, Austria and Serbia, and it informs policies of the European Union and the WHO.

In a project supported by the Wellcome Trust, Parry brought together ethicists and public health professionals to explore anti-paternalism for diverse groups with conflicting preferences and for populations whose autonomous capacities might be called into question, such as children and individuals with cognitive impairments. Participants included the UK Faculty of Public Health, The Royal College of Paediatrics and Children's Health, the Ethox Centre at Oxford University, and the Leeds Centre for Disability Studies.

Drawing on his work on ethics and armed conflict, Parry works with ForcesWatch, a London-based NGO that monitors UK military recruitment practices, on a policy briefing that sets out criteria for ethically evaluating military involvement in education and schooling.

Dahlsten works on regulation of the global market economy and financial markets. He set up and managed a network which includes several universities and the Bank of England. The network studies the policy implications of integrating financial systems into current macroeconomic models and organises high-profile workshops to communicate findings to policy-makers, bankers, and the interested public.

Stuart designs, runs, and co-delivers two philosophy courses for prisoners in collaboration with the charity Philosophy in Prison. The courses are able to accommodate any level of education or literacy and will be interesting for people from all backgrounds. Courses are also available through portable tablets (in association with Coracle Inside), which can be distributed to hundreds of prisons.

The Invisible Hand of Mental Illness project explores how mental illness replicates itself, and aims to develop integrated employment and mental health programmes. The Project *Canine Intelligence* develops the theoretical and methodological foundations to use the dog as an

animal model for dementia research, building on the fact that dogs acquire a form of dementia similar to humans in biologically relevant ways. The project *Replication in the Experimental Life Sciences* critically analyses recent calls for fundamental changes to the way research is being funded and develops a new conceptual framework for debates about the replication crisis.

Many of these projects responded to national and international priorities and initiatives: Otsuka responded to a crisis in the USS; Burri responded to a public outcry about the explosion of executive pay; Hayhoe responded to the EU's A New European Agenda for Culture; Parry responded to call of the UK Faculty of Public Health; Dahlsten responded to the problems following the financial crisis; Voorhoeve responded to demands of the WHO.

4.3 Contributions to Society

LPU, via the Forum, runs an extensive outreach and public engagement programme for philosophy, consisting of around 25 public events per year. Events have the format of panels in which philosophers discuss their research with other experts (mostly researchers outside of philosophy, or entirely outside of academia) in a manner accessible to a general audience. The programme reflects the broad range of the discipline; topics of recent talks span media impartiality, philosophy of medicine, Africana philosophy, climate change, immigration, health care, philosophy of biology, fiction, and liberal education. Events are recorded and released as podcasts via YouTube, iTunes, and similar platforms. During 2018/19, over 5.5k people attended Forum events on the LSE campus and the podcasts of these events were downloaded more than 300k times. In the wake of the lockdown, the Forum's Facebook page saw a 100% increase in engagement and its Twitter account increased by over 40%, showing that the Forum made a meaningful contribution to many people's lives during this difficult period.

Our public engagement strategy also involves an active blog, featuring articles written by members of the LPU, with the most successful posts reaching over 50k reads. Last year LPU received £10k from LSE for knowledge exchange activities, which was used to produce videos in which members of LPU explain their research in plain language; the videos are available on our websites and our YouTube channel.

The Centre and the Department share a dedicated Marketing and Communications Manager (0.8FTE) who is responsible for all LSE Philosophy social media accounts (Twitter, Facebook and YouTube). The LSE Philosophy Twitter account, with over 12.5k followers, shares content on a variety of topics, and the LSE Philosophy Facebook, with over 4.3k followers, complements the Twitter account by covering these topics in greater depth. The Forum has its own presence on social media with over 5.4k followers on Facebook, over 8.7k followers on Twitter.

In 2019 the Centre became a partner of The Philosophy Foundation, which offers philosophy classes for home-schooled children (aged 8 to 16). Four classes with groups of 15 each are offered in the Centre's seminar room bi-weekly. A large portion of home-schooled children have special educational needs and disabilities, with autism and ADHD especially prevalent. By giving these students exposure to philosophy at the LSE we are helping both their educational needs as well as enabling them to become comfortable within a university setting.

4.4 LPU's Contribution to the Sustainability of the Discipline

The Centre hosts the editorial office of the British Journal for the Philosophy of Science and provides all its infrastructure (office, access to IT, etc.) free of cost. Members of LPU contributed to the discipline through their research. They conduct research and disseminate it through publications, talks and lectures; they engage in knowledge exchange through encyclopaedias and outreach activities; and they share their expertise through refereeing papers and grant proposals (see Section 4.5).

LPU also contributes to the discipline institutionally. As noted in Section 4.1, LPU has organised a total of 91 workshops and conferences over the current REF period and put on around 50

seminars every year. Members of LPU did editorial work; they served on numerous advisory, governing, and editorial boards; they served on committees of professional associations; they were external examiners for degrees in other universities it the UK; they served on promotions and tenure committees; they examined PhD theses worldwide; and they were on numerous programme and organising committees for national and international conferences. To mention but a few examples, during the current REF period Bradley was editor in chief of Philosophy and Economics; Frigg and Birch were Associate Editors of BJPS; List was Subject Editor for Philosophy of Social Science for the Stanford Encyclopedia of Philosophy; Thoma was Book Reviews Editor at Economics and Philosophy; Bradley was on member of the scientific committee of the Institut d'Etude de la Cognition at the Ecole Normale Superieur (Paris); Brown served on the Management Committee of the Philosophical Quarterly; Frigg was a member of the Jacobsen Committee; List was on the editorial boards of Mind and Episteme; Parry is on the editorial board of Oxford Studies in Political Philosophy; Bradley is an Assessor of the Philosophy sub-panel for the current REF, and he was a member of the AHRC Peer Review College and the Expert Panel of EPSRC's M2D; Gobet is a member of the ESRC Peer Review College; Mahtani is a committee member of the Analysis Trust and the Royal Institute of Philosophy; Voorhoeve is on the boards of the Bergen Center for Ethics and Priority Setting and the Rutgers Center for Population-Level Bioethic; Thoma is Senior Co-Chair of the EPSA Women's Caucus; Redei is on the Council of the International Quantum Structures Association; Birch was treasurer of the BSPS; and Otsuka was external examiner for Oxford's PPE undergraduate degree, 2016-19.

4.5 <u>Wider influence and Recognition by the Research Base</u>

Members of LPU are influential and occupy important positions in the scientific community (see Section 4.4). In addition, members of LPU won major prizes: List was elected Fellow of the British Academy; he won the 2020 Joseph B. Gittler Award of the American Philosophical Association; and he was awarded a Leverhulme Major Research Fellowship. Birch, Bright, Mahtani, and Roberts each won a Philip Leverhulme Prize. Frigg won the Friedrich Wilhelm Bessel Research Award of the Alexander von Humboldt Foundation. Redei received the Carl Friedrich Siemens Research Award of the Alexander von Humboldt Foundation. Parry won the APA Frank Chapman Sharp Prize. Thoma received the Governor General of Canada's Gold Medal. Worrall, who only recently retired, was given an honorary doctorate from university of La Coruña, Spain. Publications of LPU colleagues featured in Philosophers' Annual "ten best papers published in philosophy in English" three times: Voorhoeve (2017), Bovens (2017), Bright (2018).

Members of LPU held 15 visiting fellowships, among them prestigious awards like the Laurence S. Rockefeller Visiting Fellowship at Princeton University, the Harsanyi Fellowship at ANU, and a Visiting Professorship in the Harvard Law School.

Members of LPU were invited to deliver a total of 138 keynotes or invited public lectures, among them large scale events like the plenary lecture at the World Bank's 2014 Understanding Risk Forum and prestigious named lectures like the Bar-Hillel Lectures (Tel Aviv) and the Uehiro Lectures in Practical Ethics (Oxford).

Members of LPU have served as referees for well over 100 different journals across philosophy, political science, and neighbouring fields, including Mind, Ethics, Nous, Journal of Philosophy, Philosophical Studies, Philosophical Review, BJPS, and Philosophy of Science. We also referee for adjacent disciplines like biology, computer science, economics, formal logic, health policy, neuroscience, physics, and psychology. At the same time, we have refereed book manuscripts for publishers in philosophy including OUP, CUP, Routledge and Springer, and many national as well as private funding agencies including AHRC, ESRC, ERC, SNSF, NF, Leverhulme Trust.