

Institution: Bishop Grosseteste University (BGU)																		
Unit of assessment: 4 – Psychology, Psychiatry and Neuroscience																		
<p>Section 1. Unit context and structure, research and impact strategy</p> <p>Bishop Grosseteste University (BGU) is making a submission to Unit of Assessment (UoA) 4 – Psychology, Psychiatry and Neuroscience for the first time. It focuses on the research activity of the staff who deliver the taught provision in psychology and in associated disciplines. The emergence of the Psychology department as a provider of research and knowledge exchange (RKE) reflects a widening of BGU's portfolio since 2014. Based in a School of Social Sciences until 2019, the Psychology department is now part of a single Faculty introduced to foster interdisciplinary work in teaching and learning as well as RKE.</p> <p>1.1 Context and structure</p> <p>The Psychology department is currently situated within one of BGU's five programme portfolio areas, Applied Social Sciences, which includes other departments with which there are joint taught programmes as well as RKE collaborations – Health and Social Care, Counselling, Business, and Sport. Staff in the Psychology department also collaborate with researchers in other portfolio areas, particularly Counselling, Education, and Special Educational Needs, Disability and Inclusion (SENDI). Together, staff from all of these subject fields form part of the Psychology, Health and Wellbeing Research and Knowledge Exchange Unit (RKEU).</p> <p>The suite of BA Psychology programmes was introduced in 2014 and there has been greater than six-fold growth in student numbers since then (see Table 1). The staff base has also expanded. In 2014 just one academic psychologist was employed at BGU, by 2020 there were nine FTE members of academic staff – each with 'significant responsibility for research'. The University has a broad and dynamic programme of research activity to showcase their work.</p> <p>With only one exception, the Psychology department staff are all independent researchers and contribute to a developing buoyant and collegial environment. The submission to REF2021 demonstrates the emergence of focus, breadth and expertise at BGU, especially in terms of outputs and environment. Impact work demonstrates broad public awareness of the emerging research activity and profile of Psychology at BGU.</p> <p>Although wide in scope and substantive in the context of a small higher education provider, the Psychology department at BGU is small relative to many other Psychology departments in other universities. The undergraduate offer is for BA programmes, reflecting interests in applied aspects of the subject field, qualitative approaches, community engagement and the arts. The award is accredited by the British Psychological Society (BPS) and therefore also reflects the scientific nature of the discipline.</p> <p>Table 1: Psychology student numbers (FTE)</p> <table border="1"> <thead> <tr> <th></th> <th>UG Single</th> <th>UG Joint</th> <th>PGT</th> <th>PGR</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>2013-14</td> <td>0</td> <td>18.5</td> <td>0</td> <td>0</td> <td>18.5</td> </tr> <tr> <td>2019-20</td> <td>51</td> <td>72.0</td> <td>0</td> <td>3.0</td> <td>126.0</td> </tr> </tbody> </table>		UG Single	UG Joint	PGT	PGR	Total	2013-14	0	18.5	0	0	18.5	2019-20	51	72.0	0	3.0	126.0
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1.2 Subject structure

Psychology is delivered at undergraduate level with single and joint honours options with a full-time academic Programme Leader (Becker). Joint programmes involve a 50/50 delivery pattern across two subject fields, with final year students completing a dissertation in each. In order to ensure that BPS accredited curriculum content is delivered, staff have been recruited and appointed across core areas of Psychology, including health, social, developmental, cognitive, and personality and individual differences, with an equal split of research expertise across quantitative and qualitative methods. Due to the economy of scale, research interests tend to be broad and complementary, rather than shared. Nevertheless, internal collaborations are building and add to external collaborations, both existing and new.

Joint honours subjects span the broad fields of education (SENDI, Education Studies, Early Childhood Studies), health (Counselling, Sport) and the humanities (English, Drama, Sociology). Approximately one third of current Psychology students are enrolled on a single honours Psychology programme.

The size and research experience of the Psychology department (see Section 2.1) have been enhanced to accompany the expansion of the student base whilst maintaining its diversity. The undergraduate programmes are delivered by academic psychologists as well as invited expert guests to deliver occasional one-off contributions to reflect the breadth of the discipline. Psychology sits firmly within the Applied Social Sciences portfolio, but there is extensive collaboration across the university and across other subject fields with broad and shared interests.

Since 2014, Psychology department staff have joined BGU from a range of national and international institutions, and have been appointed at Lecturer (Grade 7) or Senior Lecturer (Grade 8) levels. Internal promotions have been secured by three colleagues and a Reader (Horton) leads the development and strategic approach to research.

Psychology is both academic and applied in its nature. Staff and students engage with laboratory work, such as using E-Prime experiment generation software, using virtual reality to administer learning paradigms, or undertaking projects exploring sleep within the DrEAMSLab, as well as having the opportunity to undertake placements and engage with modules such as Psychology in the Arts and Communities.

Although there is no taught postgraduate psychology provision, seven of the nine staff being returned are doctoral (PhD and/or EdD) supervisors. Currently there are two full time PhD students within Psychology, two part-time students, and several others working in related disciplines (for example SENDI, language learning, exploring play across the early years).

As with any BPS-accredited course, there is a strong emphasis on the development of students' research skills, and staff expertise reflect this. The Psychology department plays a key role in sharing research methods expertise across the institution, by providing formal training in both quantitative and qualitative approaches within the EdD programme, and by ensuring that research ethics is understood and applied consistently. Colleagues within Psychology also contribute occasional guest lectures to a range of courses, including SENDI, Counselling, MA Mental Health and Wellbeing, and the Staff Development Series.

The Psychology department has been instrumental in involving students in research opportunities. Financial support for research has been secured from the Centre for Enhancement in Learning and Teaching's (CELT's) two funding streams – Learning and Teaching Investment Fund (LTIF) and Student Engagement Investment Fund (SEIF) – and by developing a Psychology Summer Research Internship Programme, which has recently been extended to run throughout the academic year.

1.3 Research and Impact Strategy

The research and impact strategy for REF 2021 has been informed by both institutional and Unit-specific drivers, motivations, and aspirations. The Psychology team has set out to achieve a strong first submission as part of its general ambition for growth and development across its RKE activities. The return reflects holistic, inclusive and integrating research extending to interdisciplinarity with SENDI and Counselling, with a focus on applied aspects, including forensic psychology, education in developing countries, health and wellbeing, as well as a commitment to personality and individual differences, mechanisms of memory formation, gender identity, and experiences of cancer survivorship.

The Psychology team's research and impact strategy for the 2014-20 cycle was therefore to:

- Build a staff base with critical mass for a REF2021 submission to UoA 4
- Generate a sufficient portfolio of high quality to make a strong first REF submission
- Develop an understanding of impact by building evaluations and measurements of public engagement into impact and knowledge exchange activity
- Engage with public impact activity
- Seek and secure external funding for research projects
- Develop an environment for high quality research and sharing that research via seminars, public engagement, social media and collaborative work
- Showcase high quality research both within the University and externally
- Develop a Psychology-led RKEU.

1.4 Psychology, Health and Wellbeing RKEU

In 2015 BGU developed Research 'Clusters', and a Psychology and Resilience Cluster was developed that comprised BGU's two academic psychologists and a number of external partners and stakeholders. With staff change and growth, alongside a research re-structure away from Clusters and towards RKEUs, the Psychology, Health and Wellbeing RKEU was developed. Launched in 2018, it is the largest at BGU and embraces the activity of University's DrEAMSLab as well as the RKE work of the Psychology department (i.e., Becker, Blanchard, Bloxham, Dimolareva, Dunn, Horton, Nastajus, Nicholds, Postavaru). It also includes collaborations with colleagues in Health and Social Care (Walsh, Garrod, McHugh), SENDI (Jeffery, Efstratopoulou), Counselling (Swaby née Elliot, Hamilton, Hicks, Cormack) and Education (Parrish, Nye). Ten of these 20 staff are early career researchers (ECRs) and the RKEU plays a strong role in supporting the development of new projects and ideas, whilst sharing best practice in relation to a range of research methods. Doctoral researchers are active in this RKEU as well as more established researchers, and the RKEU adopts an inclusive policy for anyone who has a research interest in Psychology, Health and/or Wellbeing in the broadest sense. Non-academic staff also support the RKEU (Purle, Smith, Thompson), reflecting BGU's commitment to wellbeing.

Projects cover a broad range of approaches and interests:

- Intervention studies (e.g. mindfulness, Dunn; pets as therapy, Dimolareva)
- Meta-analyses (animal assisted interventions, Dimolareva; effect of sleep on autobiographical memory, Horton)
- Laboratory-based experiments (virtual reality to explore episodic memory, Nastajus; targeted memory reactivation in sleep for procedural memory consolidation, Bloxham)
- Interview studies (lived experience of pregnancy loss, Garrod; experiences of parents of picky eaters, Cormack)
- Psychometric explorations of personality (The Dark Triad, Blanchard).

Peer-reviewed research outputs are produced by colleagues within the RKEU, along with

more creative knowledge exchange and impact events, including podcasts (e.g., The Sleep Science Pod; <https://shows.acast.com/sleep-science-pod>), webinars, consultancy work and presentations. Regular RKEU meetings, workshops and seminars take place that are advertised across the staff portal, with invitations to the wider public for specific events.

The scale of the Unit's staffing is beneficial to the development of the productivity, culture and identity of the team, and has facilitated the achievement of strategic direction through collaboration, collective activity, communication, and mutual support (see Section 2.1).

1.5 Output

Psychology will return the equivalent of 23 outputs across nine current members of FTE staff for REF 2021. The main strategic emphasis during the current REF cycle has been to promote an environment in which high quality outputs can be developed. Output production has exceeded the proportionate increase in the staff base and the majority of the outputs being returned were produced whilst at BGU. The production and selection of outputs for UoA 4 was intended to maximise the proportion of potential 3* and 4* outputs, to eliminate outputs that did not meet a minimum 2* threshold.

The submitted outputs are almost entirely empirical projects, across a range of methodological approaches. However, in addition to these, a variety of other outputs have been produced that demonstrate a broad scope of popular and impactful research at BGU, reflecting a strong community and applied focus. Examples include:

- **Project reports**
Baseline study to support Plan Cambodia's Young Bamboo integrated early childhood care and development projects in Ratanakiri and Stung Treng (PLAN International Cambodia on funded project – Horton, Smith, 2018)
Reports to the Circles UK Research and Evaluation Meeting Group, Sexual Offences, Crime and Misconduct Research Unit (Elliott, 2017 & 2020)
- **Books**
Sexual Crime and Trauma, Palgrave Macmillan (Swaby, 2020)
- **Editorials**
Cognition during sleep: Hyperassociativity, associativity and new connections. *Frontiers in Psychology* 11, January (Horton, 2021),
- **Conference proceedings**
Reactivating and consolidating memories in sleep and dreams. *International Journal of Dream Research*, 12, S40 (Bloxham, Horton, 2019)
- **SAGE research methods case studies**
Analyzing qualitative minigroup data using thematic analysis (Cormack, Postavaru, 2018)
A case of methodological premises underlying literature reviews (Postavaru, 2016)
- **Reviews**
Metaphor and hyperassociativity: The imagination mechanisms behind emotional memory assimilation in sleep and dreams. *Frontiers in Psychology: Psychopathology*. 6, 1132 (Horton, 2015)
- **Theoretical applications**
Self-determination theory as a theoretical framework for a responsive approach to child-feeding. *Journal of Nutrition Education and Behavior* (Cormack, Postavaru, 2020)
- **Practice recommendations**
Future directions: Moving forward with sexual crime prevention. In *Sexual Crime and Prevention*. Palgrave Macmillan, pp.181-200 (Elliott, 2018).
Best practice standards in animal-assisted interventions: How the LEAD risk assessment tool can help. *Animals*, 10 (6): 974 (Dimolareva, 2020).
Mapping the challenges in making the transition to taught postgraduate study in Psychology. *Psychology Teaching Review*, 25 (1): 12-21 (Becker, 2019).

Outputs are also of high quality. At least two of Dunn's research outputs are ranked in the top 5% of all research outputs scored by Altmetric. Dunn's work has also accumulated 1042 citations (according to Google Scholar) since 2014.

1.6 Impact, outreach and public engagement activity

BGU has a strong record of knowledge exchange and public engagement activity. There have been several instances of outreach work and public engagement activity. Most notably:

- Brexit, *Sunday Politics* (15 September 2019, Blanchard)
- Healthy sleep as part of the Chronarium 10-day public science exhibition in Manchester, reviewed in ITV News and <https://www.independent.co.uk/life-style/health-and-families/the-science-of-sleep-and-why-napping-is-good-for-you-a7388701.html>, (2016, Horton)
- Meditation and near death experiences, <https://metro.co.uk/2018/12/12/give-near-death-experience-without-nearly-dying-8239018/> (2018, Dunn)
- Science and dreams in *The Guardian*, *The Independent* and *Stylist* <https://www.stylist.co.uk/life/careers/sleep-researcher-dreams-meaning-science-psychology-memory/350653> (Horton, 2020).

Other outreach work has included hosting the BPS East Midlands Branch *Psychology in the Park* event in 2019, inviting members of the public to engage with practical demonstrations of Psychology research at BGU, including virtual reality demonstrations of learning and dreaming, exploring pets as therapy, and learning about sleep tips.

The institution's strategic objectives of developing its impact in psychology is expressed very strongly in the breadth of work of the Psychology department. Two impact case studies are submitted to REF 2021 that demonstrate major interest in, and impact on health and wellbeing:

- 'The impact of mindfulness-based interventions on wellbeing' (Dunn)
- 'DrEAMSLab: Sleep, dream science, health and wellbeing' (Horton).

1.7 Income

The Psychology department has attempted to capture external funding for its research, and successes are outlined in Section 3. This reflects a broader institutional imperative but in the case of Psychology initial funding has been sought for small-scale projects from a range of funders, as well as grants to support its growing public engagement activities and related projects. They include pump-priming, student-research engagement, and collective Cluster / RKEU projects that have also been supported by internal funding from either the Research and Knowledge Exchange Centre (RKEC) or CELT (see Sections 3 and 4).

1.8 Doctoral Research

Establishing a postgraduate researcher community is part of a key institutional priority to achieve Research Degree Awarding Powers. It is also a departmental ambition to provide a pathway from undergraduate study through to doctoral study via a potential new MSc Research Methods programme. From 2016 Psychology was identified as one of four disciplines for institutional studentships. The number of supervisors and supervisions have grown through the current REF cycle (see Section 2).

1.9 Strategy for post-REF 2021

The Psychology department's strategy through the next cycle will in part reflect the current institutional strategic plan to 2025, but will also:

- Increase output volume and enhance quality
- Build impact work into project design, such that intervention, audit and evaluation activity is routine

- Further develop the expertise in meta-analysis and systematic review methods
- Grow income
- Increase doctoral student numbers
- Achieve Research Degree Awarding Powers.

Section 2. People

2.1 Staffing strategy and development

The Psychology department's approach to staffing has been to increase the number of its research-active members through both recruitment and the development and support of its staff. Recruited colleagues have been experienced researchers, even though early-career at the time of appointment (Dimolareva). The research activity and production of outputs of sufficient quality has meant that seven of the staff have been approved by the University of Leicester to act as doctoral supervisors. Recruitment has also been targeted to support the teaching and learning of an increased student population and programme structure based around core BPS topic areas.

The Psychology department is highly research active and has generated a large output pool. The impact case study threshold requirement of two has been met and an external peer reviewer has been recruited to support the evaluation of output quality evaluation and to provide mentoring support in the final stage of the assessment period.

Table 2: Psychology Unit permanent staff establishment (FTE)

	FTE	Submitted	Reader	Senior Lecturer	Lecturer	Doctoral Supervisors
REF 2021	9	9	1	5	3	7

2.2 Postgraduate research

The Unit is productive, collaborative and cohesive in its culture and identity. This is a benefit derived from a single location for teaching and public spaces, and access to a Psychology laboratory housing most of the specialist equipment such as BIOPACs and the virtual reality facilities. There is also the DrEAMSLab (sleep laboratory) space and other specialist facilities, such as small interview rooms for data collection and analysis. Staff numbers and physical location have facilitated team interaction, communication, exchange, peer support, and ethos.

Doctoral research projects are typically supervised by disciplinary and interdisciplinary teams across the BGU Faculty. Supervisions involving Psychology staff since 2014 are as follows:

Table 3: Doctoral students supervised (headcount)

	Internal		External
	First	Second	
2014-21	4	1	2

First-supervised projects within the Psychology department comprise:

- Is dreaming related to sleep-dependent memory consolidation (Bloxham)
- Experiences of parents of picky eaters (Cormack)
- Experiences and care of pregnant women following a previous pregnancy loss: A Heideggerian analysis (Garrod)
- Virtual reality explorations of episodic memory (Nastajus).

In addition, Horton has examined three PhDs externally and one MRes.

2.3 Equality and diversity

Equality and diversity (E&D) are overseen and reported at institutional level, with UoA-specific profiling monitored and evaluated as part of centrally directed REF Equality Impact Assessment (EIA).

The E&D data are reported in summary form in the Institutional Environment Statement, the EIA final report, and made available for audit as appropriate. Data are not given in detail in BGU's Unit-level Environment Templates and with full protected characteristics profiling, given the relatively small numbers of staff comprising the submission to this UoA.

Section 3. Income, infrastructure and facilities

3.1 Income

The Psychology Unit has aimed to grow its external research income through small grant capture. This has been complemented by success in winning competitive internal funding aimed at pump priming or student engagement and co-production. The department has been awarded various grants and funding to support research and related public impact as well as awarding four full-time doctoral studentships, as outlined above.

Successful external income is outlined below. During the current REF cycle total funding secured was £69,010.

Table 4: Income secured from Psychology staff, 2014-2020

Awarded in	External Funding	Internal Funding	Awarded to
2020	£5,000 secured by the United Lincolnshire Hospitals NHS Trust		Postavaru (PI).
2020		£350 BGU LTIF & SEIF, <i>Testing the Simulation of Smile Model (SIMS): the role of priming, emotion contagion, and sex in smile detection accuracy</i>	Dunn (PI), Blanchard, Horton
2020	£400 secured for commissioned sleep Hygiene webinars, 2 x Brindley Place, 2 x Lakeside Harbour		Horton
2019	£2,000 secured Clore Social Leadership Chapter		Nicholds
2019		£3,000 Learning and Teaching Fund (BGU), <i>Sleep well: The development of a targeted sleep hygiene intervention in students and staff</i>	Horton (PI), Wood (UoA 23), Blanchard, Dunn.

2019	£1,500 awarded from Dream Science Foundation <i>Reactivating and consolidating memories in dreams</i>		Bloxham, Horton.
2018	£18,596 secured by the United Lincolnshire Hospitals NHS Trust		Postavaru (PI)
2018		£1,092 Learning and Teaching Innovation Fund	Postavaru (PI), Becker
2017	£25,381 Plan Cambodia, <i>Baseline study to support Plan Cambodia's Young Bamboo integrated early childhood care and development projects in Ratanakiri and Stung Treng*</i>		Horton <i>Allocated to UoA 23</i>
2017		£2,979 BGU internal Research Investment Fund, <i>Episodic and autobiographical memory consolidation during sleep: Implications for learning in a Higher Education environment</i>	Horton (PI), Dunn, Smith, Nastajus, Bloxham.
2016-18	\$2,500 (approximately £1,812 equivalent) secured from the Dream Science Foundation (USA), <i>Future oriented cognition in dreams</i>		Horton (PI)
2017		£900 International grant to support the set-up of an international clinical psychology fieldwork, Foundation Fund	Postavaru (PI)
2017	£3,000 awarded by the BPS, <i>The psychological and physical wellbeing of cancer carers: how much do we (not) care?</i>		Postavaru (PI)
2015-17	£3,000 BPS Seminars Competition, <i>What can dreaming tell us about memory consolidation in sleep?</i>		Horton (PI)
Total	£60,689	£8321	=£69,010.

3.2 Infrastructure and facilities

In 2015-16 the Psychology laboratories were introduced for student and staff research use - the main Psychology lab and the DrEAMSLab. Launched by Horton in 2016, the DrEAMSLab was supported by the BPS as part of a funded programme of activities exploring dreaming and memory consolidation. It has featured extensively in national and international media, specialising in dream, sleep and cognition research. In 2018-20 the laboratories were re-developed to include two individual interview suites to also house virtual reality, experiment generation software within individual cubicles. In addition, there is a sport and exercise science suite available to Psychology and Sport students and for those requiring specialist equipment for

dissertation projects. Individual laptops are available to all students creating portable laboratory space which has proved especially supportive during the COVID19 pandemic.

Software supporting research includes NVivo (qualitative analysis software), SPSS and AMOS (statistical software), Qualtrics and Online Surveys (survey subscription accounts), E-Prime (experiment generation software), Sleep Profilers (portable basic EEG for polysomnography), BIOPAC for basic physiological measurements and a library test bank of psychometric measures.

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

4.1 Collaborative partnerships and networks

All staff being returned within the Psychology REF 2021 submission are engaged with both academic and public engagement collaborations. Postavaru, Horton, Dunn, Dimolareva, Jeffery, Efstratopoulou and Blanchard all act as principal investigators on collaborative national and international projects. Horton has also been recruited by researchers and practitioners in Australia to support a doctoral research project.

The following collaborative partnerships and networks beyond traditional academic collaborations exemplify the breadth of expertise and research involvement within the Unit:

- Nicholds (an ECR) is involved with several non-academic partnerships – Steering Group member for CLORE Leadership Chapter, Lincolnshire; Tackling Gender Inequality Working Group, BGU; Director, Linking Up Ltd (Social Enterprise); Trustee and Company Director, Children's Links; and Trustee, LIVES First Responders.
- Dimolareva, Becker, and Nicholds coordinated the Psychology in the Park event in 2019 (BGU/BPS East Midlands).
- Postavaru is an Honorary Researcher at the United Lincolnshire Hospitals NHS Trust, Haematology Department, February 2019
- Horton is a founding member of the Lincoln Sleep Research Centre; and is an external faculty member of the University of Swinburne, Australia.

4.2 Research council / committee membership

Becker was elected Chair of the British Psychological Society East Midlands Branch in 2018. Blanchard is Secretary/Treasurer for the International Society for the Study of Individual Differences. Horton is an expert reviewer for the ESRC and an Advisory Board member for *Clinical Pharmacist*.

4.3 Committee membership and leadership of associations and societies:

Nicholds is a BPS East Midlands Committee Member. Horton acted as BGU's representative for the East Midlands and is an advisory board member for *Clinical Pharmacist*, specialising in sleep.

4.4 Publication editorial positions and reviewing activities:

Colleagues have extensive experience with peer reviewing and editorial positions, including:

- Horton has been a regular reviewer for *Frontiers in Psychology*, *Psychopathology* (action and topic editor), *Frontiers in Psychiatry* (action editor), *Clinical Pharmacist*, *Journal of Cognitive Neuroscience*, *Consciousness and Cognition*, *Spanish Journal of Psychology*, *American Journal of Psychology*, *International Journal of Dream Research*, *Dreaming and Brain Sciences*.
- Swaby has reviewed for *Journal of Forensic Psychiatry and Psychology*, *The World Journal of Biological Psychiatry*, and is an Academic consultant for SAGE Publications (SAGE Research Methods Cases: Medicine and Health).
- Blanchard reviews and edits for *Personality and Individual Differences*.

- Postavaru is an academic consultant for *SAGE Research Methods Cases: Medicine and Health*.
- Dunn reviews for *Mindfulness, Applied Neuropsychology: Child, Spatial Cognition and Computation, and Political Psychology*.

4.5 Conference and symposium organisation:

The Psychology department has been involved extensively in conference and symposium organisation, with some events being hosted at BGU, but many more taking place externally. Recently, several events have moved online, with department members contributing to their organisation and delivery. Indicative examples include:

- Horton, C.L. (2017). To dream perchance to remember, Invited keynote presentation, Research on the Rise Conference, BGU
- Horton, C.L. (2018) Sleep and learning: How to maximise memory in the most restful of ways! Oral presentation at BGU Annual Learning and Teaching Conference, BGU
- Nicholds, T (2020) Women in Third Sector Leadership: Putting your wellbeing first. Online event with St Barnabas Hospice
- Nicholds, T (2019). Women in Third Sector Leadership: An Introduction to Psychological Resilience. Involving Lincs and The National Lottery Community, BGU
- Nicholds, T (2019). Women in Third Sector Leadership: Peer Support and Mentoring. Involving Lincs, Boston Lincolnshire
- Nicholds, T (2019). Women in Third Sector Leadership: Facilitating Difficult Conversations. Involving Lincs, CLORE Leadership Chapter, Gainsborough, Lincolnshire.

4.6 Grant/project external peer refereeing/reviewing

Horton has reviewed several external grants for the ESRC, BBSRC, Wellcome Trust, Royal Society, provided an end of award report for the ESRC, and is a British Council and Newton Fund reviewer.

4.7 Awards, prizes, distinctions and fellowships

Bloxham's PhD research, supervised by Horton and Fleming (BGU), was awarded funding and commended as doctoral research at the International Association for the Study of Dreams.

4.8 Keynote addresses and public lectures/workshops/performances

Horton has been invited to deliver a series of keynote and public lectures, as outlined below:

- Kirov R, Horton C.L, Llewellyn S. (2017) Spotlight on new concepts in sleep and cognitive neuroscience: The role of dissociative consciousness and predicting coding. Plenary lecture at Scientific Conference and Workshop with International Participation Dedicated to the 70th Anniversary of the Institute of Neurobiology, Bulgarian Academy of Sciences, Sofia, Bulgaria.
- Horton, C.L. (2018) Sleep well, dream well, be fearless (almost). TEDx talk. Brayford Pool #Fearless event, Lincoln.
- Horton, C.L. (2017). Sleep, memory and dreaming, Invited keynote presentation, "Midsummer Night of Science" event, Royal Institution (<http://www.rigb.org/whats-on/events-2017/july/public-experience-midsummer-night-of-science>).
- Horton, C.L. (2017). Dreaming to remember, Invited lightning presentation and associated DrEAMSLab interactive exhibition, "Lates: Dreams" event, National Museum of Science and Media, Bradford
- Horton, C.L. (2016). The wence of dreaming, Invited keynote presentation, "Psychology4Students" event, British Psychological Society, London. (https://www1.bps.org.uk/system/files/user-files/psychology%20%20students%202016/P4S%20London%202016_WEB.pdf; see also a

review of the presentation here: <http://thepsychologist.bps.org.uk/volume-30/february-2017/tour-dreams-and-nightmares>