UNIVERSITY OF HERTFORDSHIRE

Psychology and Sport Sciences Research Seminars 2019-2020

SEMESTER A

Day & Time: Thursdays 16.00-17.30 (but see a different start time on 7 November)

Locations: 1H256 (CP Snow) and A154 (Lindop) on College Lane Campus

Date	Speaker / Topic	Room
10.10.19	**Joanna Adler, Middlesex University (now at UH)** *Parents are paranoid, or maybe we are sleepwalking into a digital doom?*	**1H256**
17.10.19	**Caitlin Hitchcock, University of Cambridge (MRC Cognition and Brain Sciences Unit)** *Harnessing cognitive science to improve treatment of emotional disturbance*	**1H256**
24.10.19	**Farshid Amirabdollahian, University of Hertfordshire** *Robotics and AI as interactive tools to measure human performance*	**1H256**
31.10.19	**Anna Weighall, University of Sheffield** *The bedtime story effect: The role of sleep in vocabulary learning (and beyond)*	**1H256**
07.11.19 6:30-8:00 pm	**British Psychological Society London and Home Counties Networking Event** **Anna Cox, University College London** *Digital wellbeing: Increasing productivity and reclaiming work-life boundaries*	**A154**
14.11.19	**Katherine Brown, Coventry University (now at UH)** *Behaviour change and health improvement: working with Public Health systems and stakeholders for real-world impact of interventions*	**1H256**
21.11.19	**Emmanuel Pothos, City University, London** *The rational(?) status of the conjunction effect*	**1H256**
28.11.19	**Andrea Halpern, Bucknell University, US** *How well do we know how well we are imagining sounds?*	**1H256**
05.12.19	**Joseph Mathews, Birmingham City University** *Making weight in combat sports: Can we save lives?*	**1H256**

Speaker	Abstract

Joanna Adler, *Middlesex University (now at UH)* **10.10.19**	***Parents are paranoid, or maybe we are sleepwalking into a digital doom?*** This research seminar will begin with a short review of the digital/online elements of Joanna's work in three areas: young people's experiences of pornography; online hate offending and development of digital resilience. She will glance on street gang interventions along the way. The seminar will hopefully foster some discussion amongst colleagues of how our research can have impact with and be influenced by young people and parents. It is intended that this will also lead into consideration of our roles in influencing policy and practice at local and governmental levels.
Caitlin Hitchcock, *University of Cambridge* **17.10.19**	***Harnessing cognitive science to improve treatment of emotional disturbance*** Cognitive behavioural therapies are effective in treating emotional disturbance but do require further development as many recipients do not experience adequate improvement. Utilising experimental cognitive science to elucidate the cognitive factors that both drive psychopathology and underpin treatment change is vital to improving treatment effectiveness. My research transitions insights from cognitive science toward improved therapeutic practice, by focussing on a key cognitive system – autobiographical memory. Autobiographical memory processes are implicated in the course of multiple disorders, particularly depression and posttraumatic stress disorder. This talk will use my work in depression as a case example to demonstrate how basic science can be harnessed to develop novel, process-focussed intervention techniques.
Farshid Amirabdollahian, *University of Hertfordshire* **24.10.19**	***Robotics and AI as interactive tools to measure human performance*** This talk will offer a number of case studies from adaptive systems research group, related to assessment of human performance in the context of rehabilitation, assistance and physical/cognitive well being. Robots provide repeatable interactive tools with the ability to record physical characteristics of the interaction, while physiological sensors such as EMG, EEG and GSR provides lights for aspects of performance related to our musculoskeletal, cognitive and emotional status of the interacting person. As a whole, these provide metrics that feed into models of performance, recovery or individual needs. The ultimate goal is to use such metric towards generalising and personalising interaction with individuals, the generalisation for adapting to the norm of human interaction and the personalisation for fitting in with individual needs. The two, while simple in appearance provide a substantial challenge to requirement engineering and success of interactive tool design.
Anna Weighal, *University of Sheffield* **31.11.19**	***The bedtime story effect: The role of sleep in vocabulary learning (and beyond)*** Sleep has a crucial role to play in our most basic cognitive functioning, including an active role in everyday learning and memory consolidation, which is especially important in the context of cognitive development. The ways in which sleep can affect our ability to lay down new information and to learn will be discussed with reference to a series of experiments which investigated spoken word learning in children (e.g., Henderson, Weighall, Brown & Gaskell, 2012; Weighall et al., 2017). Vocabulary acquisition in young children can appear rapid and seamless. Yet research with adults suggests integration of novel and existing knowledge (measured by engagement in lexical competition) requires a consolidation period associated with sleep (e.g., Dumay & Gaskell, 2007). These findings are well explained by neural models of learning in which sleep provides an opportunity for hippocampal information to be fed into long-term neocortical memory. The talk

	will provide an overview of a programme of research which investigated whether this time course dissociation also characterises word learning in children between the ages of 5 and 12 years, using a range of research methods including eyetracking and polysomnography (EEG during sleep). Our results suggest that children, like adults, require a period of offline (sleep-associated) consolidation in order to establish new words in the lexicon - and that these findings hold true across a range of different learning paradigms. Furthermore, a richer established body of vocabulary knowledge may support consolidation and integration of new vocabulary. The implications of these findings for our understanding of memory and learning, and cognitive development more generally will be considered throughout the talk. If there is time I will also explore the way we have been applying this theoretical knowledge to inform behavioural sleep interventions with families and schools. This talk will provide you with the perfect excuse for sending your children to bed early and perhaps even for a nap yourself!
Anna Cox, *University College London* **07.11.19** **UH-BPS event**	***Digital wellbeing: increasing productivity and reclaiming work-life boundaries*** Digital technology companies such as Microsoft promise a future in which work is so efficient that we'll all be working 3 day weeks. Instead, productivity tools like email, Slack, Dropbox and our ever present smartphones seem to have expanded work so that the Labour party's promise of a 32 hour week seems more like a dream than a reality. So why do we still struggle to get things done despite being constantly connected? In this talk, Professor Anna Cox will describe how the ubiquitous nature of computing technologies has led to the productivity paradox of the digital age – a time in which we seem to be working more than ever. Drawing on her research in the multi-disciplinary field of human-computer interaction, she will describe evidence-based strategies that can help us be more productive, reclaim our work-life boundaries and increase our wellbeing.
Katherine Brown, *Coventry University (now at UH)* **14.11.19**	***Behaviour change and health improvement: working with Public Health systems and stakeholders for real-world impact of interventions*** Health Psychology is a broad discipline with research spanning a range of fields relevant to every part of the health and social care systems. In the UK, applying health psychology to healthcare in the NHS has typically received greater attention than Public Health with regards implementing research evidence into practice. Prevention of ill-health and maintaining health and wellbeing are however fundamental to both Health Psychology and Public Health. Arguably, both fields working in partnership to forge a stronger future and greater success at improving health outcomes is likely to be of great benefit. One way to achieve this is through increasing collaboration between public health departments and research-active health psychologists. In this seminar I will draw on over a decade's experience of working in this way. I will illustrate how the collaboration itself provides otherwise unidentified opportunities to work with existing systems and service infrastructure that can provide a clear pathway to impact. Of course, realising the impact is less straightforward because a range of factors including those outside of a researcher's sphere of influence can affect the ultimate outcome. In addition, I will discuss the findings from and progress of research with commissioners and providers of public health improvement services where we have tried to understand more about the ways in which we can better support the application of our research findings from health psychology into public health practice. This research has helped identify a number of other avenues on which to focus our efforts for supporting mobilisation of evidence into practice.

Emmanuel Pothos, *City University, London* **21.11.19**	***The rational(?) status of the conjunction effect*** The predominant normative and descriptive framework for human decision making is classical (Bayesian) probability. Despite many predictive successes, there have also been reports of persistent violations of key classical principles in human behaviour, for example, as associated with the influential Tversky, Kahneman tradition (e.g., Nobel prize in economics for Kahneman in 2002 and recently for Thaler). A particularly evocative finding is the so-called conjunction effect, according to which in some cases participants are happy to consider Prob(A&B)>Prob(A). Can human intuition be so much at odds with (classical) probabilistic prescription? Classical probability theory is not the only formal probabilistic framework potentially relevant in decision theory. Quantum probability theory — the probability rules from quantum mechanics without any of the physics — is a potential alternative. Can the application of quantum probability theory shed light on the rational or otherwise status of the conjunction effect? Can we be justified in employing tools from physics in psychology? What exactly is quantum in human cognition? Are there novel, interesting predictions from the application of quantum theory to psychology? The aim of the seminar would be to consider these questions and generally motivate the application of quantum theory in cognition.
Andrea Halpern, *Bucknell University* **28.11.19**	***How well do we know how well we are imagining sounds?*** Mental imagery abilities vary among individuals, as shown both by objective measures and by self-report. Few imagery studies consider auditory imagery, however. In this talk, I will argue that a. there are individual differences in auditory imagery for music b. these can be captured via self-report and c. this self-report predicts some interesting behavioral and neural aspects of imagining music. The Bucknell Auditory Imagery Scale is a short self-report measure encompassing both Vividness and Control of auditory imagery. High scores on Vividness predict outcomes as varied as source memory errors in distinguishing heard from imagined tunes pitch imitation tasks as well as neural activity and gray matter volume in several brain areas that are known to be involved in auditory imagery. Another way auditory imagery may vary is from trial to trial and I offer some examples of the predictive value of self-reports of that more "state" aspect of auditory imagery. Even though self-report measures encompass both cognitive and metacognitive aspects, they are useful tools in accounting for individual differences in high-level cognitive skills.
Joseph Mathews Birmingham City University **05.11.19**	***Making weight in combat sports: Can we save lives?*** Combat sport athletes engage in a process called making-weight; which involves large weight reduction in the final days before the weigh-in, followed by subsequent weight re-gain prior to competition. This process has resulted in several fatalities. Despite this, many athletes continue to manipulate their body weight using potentially harmful methods. Governing bodies have failed to implement regulations to limit rapid weight loss and safeguard athletes. Sports nutritionists, and other members of the SEM team, are imperative to help educate and support athletes to make-weight safely.

All are invited for drinks and snacks after the talks in the Psychology Staff Room (2H256) in CP Snow. Enquiries: Lia Kvavilashvili (l.kvavilashvili@herts.ac.uk)**, and Lindsay Bottoms** (l.bottoms@herts.ac.uk)