PhD Opportunities in the School of Psychology and Clinical Language Sciences

Here is a list of some of our currently available PhD opportunities within the School of Psychology and Clinical Language Sciences. This document is updated regularly with new PhD opportunities to please check back regularly.

You can also propose your own project that aligns with our research. Find out more about how to apply for a PhD, and identify and contact a supervisor.

PhD projects in Clinical Neuropsychology/Clinical Neuroscience

Supervisor: Dr Samrah Ahmed (samrah.ahmed@reading.ac.uk)

Cognitive predictors of real-world patient and carer outcomes in Alzheimer's disease.

Cognitive tests are an essential and effective tool in aiding clinicians in the identification of cognitive changes that herald a diagnosis of Alzheimer's Disease. While such tests extract a cognitive profile, few are able to indicate how these impairments influence the patient's ability to function independently. Research in our lab has shown that cognitive changes due to memory, language and attention are predictors of adverse patient and carer outcomes, such as loss of functional independence and increased carer burden. Identifying such real-world changes is essential to inform post-diagnostic support and to stratify those patients at higher risk of adverse outcomes.

The aim of this study is to create a novel cognitive assessment which incorporates risk-assessment of real-world changes associated with cognitive impairment. The aim will be to create an assessment which will be able to significantly predict the likelihood of adverse patient outcomes based on cognitive scores.

Candidates should have a first or strong 2.1 degree in psychology or neuroscience and a distinction or high Merit in a relevant Masters qualification. The candidate should have a demonstrable interest in the topic and strong written and oral communication skills.

PhD projects in Psychopathology & Emotional Disorders, Personalised Nutrition, Perception and Action and Cognitive Control

Supervisor: Dr Katie Barfoot (katie.barfoot@reading.ac.uk)

My research interests fall into the areas of nutrition, cognition, mood, women's health and mental health. I welcome project ideas across any of these areas.

Nutrition and the brain: To date, my main area of investigation is flavonoids. Flavonoids are naturally occurring compounds found in (but not limited to) fruits, vegetables and tea, and have been found to improve cognition and mood. My previous research has explored these effects in healthy and ADHD school-aged children, and in postnatal mothers. I have also supervised projects investigating the effects of flavonoid-rich dark chocolate and tea in young and older adult populations. I am open to ideas from students on flavonoid (e.g. berries, tea, cocoa, citrus fruits) or non-flavonoid (e.g. water, caffeine, vitamin D) nutritional interventions. Other suggestions or ideas for projects related to nutritional psychology are welcomed for discussion.

Exercise and the brain: I am also interested in the effects of exercise on the brain (cognition, mood or wellbeing). Some projects that would be of interest to me are: 1) Yoga vs. HIIT: Does exercise intensity affect psychological wellbeing? 2) The effects of aerobic and anaerobic exercise on cognitive function and mood.

For areas above I would happy to examine effects in different populations (e.g. pre-school children, adolescents, clinically 'at-risk' populations (ie. low mood, anxiety), older adults) if this was of interest to the student.

PhD projects in Perception and Action, Cognitive Control

Supervisor: Prof Philip Beaman (c.p.beaman@reading.ac.uk)

Auditory cognition. Thinking in sound, thinking about sound. A wide range of possibilities from tunes that become stuck in the head ("earworms") - the how, the when, and the why - through auditory memory - echoic memory, musical memory and musical learning, and earwitness testimony - and auditory attention and distraction; how do we focus on one auditory source amongst many competing inputs, what causes distraction and what are the consequences (human error, ergonomics, human factors etc), and how might we mitigate them.

PhD projects in Cognitive Control, Language and Bilingualism, Clinical Language Sciences, Neurogenic speech-language disorders in adults

Supervisor: Dr Arpita Bose (a.bose@reading.ac.uk)

Language production impairments in aphasia, dementias; bi/multilingualism in neurogenic disorders, therapy and rehabilitation of aphasia.

https://www.reading.ac.uk/pcls/staff/arpita-bose

Development and characterisation of scalable tools to measure neurodevelopment

Supervisor: Prof Bhismadev Chakrabarti (b.chakrabarti@reading.ac.uk)

Most research on neurodevelopmental conditions such as autism takes place in high-resource settings in western Europe and the USA. Yet, the majority of children with neurodevelopmental conditions reside in low and middle income countries. To tackle this gap in specialist resources, we have been developing apps to measure diverse aspects of neurodevelopment, which can be used by non-specialists (see https://www.medrxiv.org/content/10.1101/2021.06.24.21259235v1 for example of this ongoing work, as well as https://research.reading.ac.uk/stream).

We are looking for interested PhD students to contribute to this development process by validating these apps in and outside the laboratory environment. You would be working alongside a wider international interdisciplinary team. The ideal student/s will be familiar and comfortable with the use of quantitative methods. Prior experience in testing children would be an advantage.

Studying empathy and social motivation in real world social interactions

Supervisor: Prof Bhismadev Chakrabarti (b.chakrabarti@reading.ac.uk)

Our group has been studying empathy and social reward processes in autistic and nonautistic adults (see www.bhismalab.org/publications for examples). Nearly all of these studies take place in the lab, under tightly controlled circumstances. We are looking to develop a repertoire of experiments to measure these constructs in real world social interactions. The ideal student will have a background in Psychology, and be comfortable in the use of empirical and quantitative methods. Prior experience in testing adult humans will be an advantage.

www.bhismalab.org

PhD projects in Psychopathology & Emotional Disorders, Affective Neuroscience, Motivation and Behaviour Change, Perception and Action, Cognitive Control, Development, Physiology, Cognitive Science, Philosophy, Methods Development

Supervisor: Prof Anastasia Christakou (a.christakou@reading.ac.uk)

Research in our lab investigates the neurobiological and psychological mechanisms of adaptive behaviour and learning, including how they develop, and what role they play in psychopathology. We use functional and structural neuroimaging, neurochemical imaging, peripheral and central psychophysiology, mathematical modelling, behavioural testing, and personality and psychodiagnostic instruments. With collaborators from multiple disciplines, we work at the interface of the following themes: - Multi-level studies of the regulation of positive and negative emotion - Network function in expert and disordered decision-making - The neurobiology of belief and agent-level representation - Typical and atypical adolescent brain development - The links between brain, hormone, and cardiovascular function across the lifespan.

https://anastasia.christakou.org
https://research.reading.ac.uk/cinn/

Development of Language Processing

Supervisor: Dr Ian Cunnings (i.cunnings@reading.ac.uk)

How do children develop the language processing abilities to understand language in real-time during comprehension? This project examines this issue using the visual world eye-tracking paradigm, where participants are presented with a visual scene whilst listening to sentences. Students on this project will run a series of visual world eye-tracking studies examining language comprehension in children as compared to adults. I welcome applicants interested in examining the development of language processing in children from either the perspective of monolingual and/or bi-/multilingual language acquisition.

Memory encoding and retrieval during language processing

Supervisor: Dr Ian Cunnings (i.cunnings@reading.ac.uk)

Understanding language in real-time requires us to keep track of who did what to whom in a sentence or piece of discourse. This ability crucially depends on our ability to encode and retrieve information from memory during language processing. This project examines the factors that influence successful memory encoding and retrieval, and thus successful comprehension, during language processing. Students on this project will conduct a series of behavioural experiments, typically self-paced reading and/or eye-tracking during reading, but also potentially neuroscientific techniques such as EEG, that examine memory encoding and retrieval during sentence and discourse processing. Much of the work on this project examines these issues in English, but I also welcome students to work on other, understudied languages.

Multilingual Language Processing

Supervisor: Dr Ian Cunnings (i.cunnings@reading.ac.uk)

This project examines the similarities and differences between monolingual and bilingual sentence comprehension. It in particular focuses on native and non-native sentence processing. Achieving high proficiency in a non-native language can be particularly challenging in adulthood, and this project aims to examine the factors that influence successul non-native language comprehension.

Students on this project will run a series of behavioural studies, using tasks such as self-paced reading and/or eye-tracking during reading, but also potentially neuroscientific techniques such as EEG. Work on this project typically examines the acquisition and processing of non-native English, but I am also open to supervising research into the acquisition and processing of other languages that an applicant may know.

Inhibition and Excitation in the brain

Supervisor: Dr David Field (d.t.field@reading.ac.uk)

An appropriate balance between excitatory and inhibitory neural processes in the brain underlies healthy psychological function. Two examples of conditions in which there is an imbalance are autism and ADHD. In these two cases there is a realtive lack of GABA, which is the main neurotransmitter underlying the inhibitory side of the balance. There is also some evidence of a simialr imbalance in anxiety disorders. Motivated by these observations, this research project explores ways of increasing the inhibitory (GABAergic) function in the brain. One method of doing this that I have promising pilot data for is dietary supplementation with the precursors of the GABA neurotransmitter – mainly B vitamins. Another potential method is meditation. Levels of GABA in the brain can be approximated using carefully designed behavioural tests, or measured more directly using MRI.

PhD projects in Health Psychology and Chronic Illness/Injury

Supervisor: Dr Katherine Finlay (katherine.finlay@reading.ac.uk)

Spinal Cord Injury; Chronic Pain Management; Intervention development in topics related to pain management; Adherence

How observers could represent a 3D space

Supervisor: Prof Andrew Glennerster (a.glennerster@reading.ac.uk)

Currently, we have very little idea about how the human brain represents 3D space. This is a particularly difficult problem when you consider how much the retinal image changes as people move their head and eyes. In our laboratory, we compare models of spatial representation that could explain how people behave when they carry out tasks such as pointing at objects that are currently out of sight or finding a shortcut to objects in a maze. We do this in immersive virtual reality, where participants wear a head mounted display, so that we can design and control the environment and, often, change the layout of the scene as participants walk through it.

We have close links with the Robotics Group in the University of Oxford (http://www.robots.ox.ac.uk/~tvg/). Some of the hypotheses we are currently exploring are inspired by the recent success of reinforcement learning on navigation tasks. There is flexibility to make a PhD project more computational, and more closely linked with the Oxford group, or more directly focused on human spatial behaviour.

Mental health and cognition in the context of physical ill health: targeting anxiety and depression in long-term neurological conditions

Supervisor: Prof Aileen Ho (a.k.ho@reading.ac.uk)

The concept of human well-being is a fundamental aspect of our existence and is often particularly vulnerable upon diagnosis and/or progression of long-term neurological conditions for which there is no cure, such as Parkinson's, Alzheimer's, Multiple Sclerosis and Huntington's disease. As these conditions involve, insidious cognitive, motor and psychopathological deterioration tends to occur, and the adjustment and coping process can be additionally complex and challenging, affecting mental health and well-being. Projects in this specific area of interface between neuropsychology, clinical psychology and health psychology could be focused on 1)patients and also 2) family carers.

Possible areas of investigation include: Adjustment and coping processes of patients at various points of the disease trajectory using qualitative and quantitative measures, mindfulness and various cognitive behavioural interventions to ameliorate maladaptive

adjustment and coping, other approaches such as positive psychology, social interaction, ecopsychology etc to build resilience to promote mental well-being and flourishing in family carers as well as patients. Experimental cognitive training and rehabilitation to improve patient functioning, Psychological, cognitive, motor or a combination of these in real-world interventions on symptoms, disease progression, health status or health-related quality of life and subjective well-being. The use of technology and development of apps to facilitate all of the above is also of interest, as is the use of brain imaging to examine the neurophysiological effect of interventions. Potential candidates are invited to discuss their interest in relation to this topic in order to tailor projects to suit individual backgrounds, interests and skills.

Website: https://research.reading.ac.uk/neurodegenerative-diseases/parkinsons-disease/

https://research.reading.ac.uk/neurodegenerative-diseases/multiple-sclerosis/

Moving together in time (synchrony/multisensory integration): the effects of coordinated movements on physical performance, social cognition and wellbeing

Supervisor: Dr Juliane Jacqueline Honisch (J.J.Honisch@reading.ac.uk)

Our Social Cognition and Movement Rehabilitation Lab (SCMR) investigates various topics on the role of non-verbal behaviours in everyday conversations such a gestures, social-cognitive effects of interpersonal synchrony (two or more individuals moving together in time) and explores movement interventions (e.g. dance exercises) for older adults with and without medical conditions and for children. This project aims to help us further understand the multifaceted benefits of engaging in highly coordinated, synchronous movement activities in a social everyday setting. Depending on the applicant's interests and skills, this project will most likely focus on healthy adults, but there is the possibility of working with adults/older adults (NHS) with medical conditions which negatively affect their motor control. This work will use a variety of methods, including behavioural and psychophysiological methods, to examine how synchronous movements affect movement performance, social cognition and overall well-being. Successful candidates will be supervised by Dr Juliane J Honisch and will have the opportunity to work closely with national and international collaborators (clinical experts, engineers and psychologists). The student will have access to the latest 3D motion-tracking technology and medical body composition analysers, and will receive training on conducting kinematic analyses. We also encourage applications from individuals who have an interest in exploring virtual reality as a tool to analyse multi-person coordination.

This PhD is suitable for individuals with a BSc/MSc in Psychology, Physiotherapy, Engineering and a highly related subject area.

Please, contact me directly if you are interested working within our lab.

PhD projects in Psychopathology & Emotional Disorders and Personalised Nutrition

Supervisor: Paul Jenkins (p.jenkins@reading.ac.uk)

I am interested in supervising topics on mental health, with a particular interest in disordered eating. My work has included 'non-clinical' and clinical samples, as well as looking at the effects of (psychological) treatment, patient characteristics, and the economic correlates of eating problems. A PhD thesis related to disordered eating can incorporate several diverse methodologies although I anticipate that most will include a (systematic) review of the relevant literature to inform subsequent (quantitative) projects. The specific topics for the

PhD and sample(s) to be recruited can be discussed and agreed based on mutual interest, expertise, and the candidate's experience.

PhD projects in Nutritional effects on cognition and mood

Supervisor: Dr Dan Lamport (daniel.lamport@reading.ac.uk)

I am interested in supervising research proposals which explore the relationship between nutrition, diet and/or metabolic processes such as type 2 diabetes and glucose regulation on cognitive function outcomes and mood outcomes in humans.

Tracking sound awareness in congenital amusia and developmental dyslexia

Supervisor: Dr Fang Liu (f.liu@reading.ac.uk)

Speech, music, and reading are complex human cognitive functions involving the processing of sound. To many, these processes are fast, automatic, and effortless. However, individuals with congenital amusia and developmental dyslexia have difficulties in processing pitch and phonemes, which lead to disorders of music processing and reading, respectively. In addition, these individuals show overlapping deficits in auditory processing and speech perception, with impaired sensitivity and awareness of sound (be it pitch or phonemes) as a critical thread linking impaired cognition across speech, music, and reading domains.

Using a multimethod and multi-deficit approach, this PhD project will examine the cognitive and neural mechanisms of sound awareness, with the overarching aim of elucidating how sensitivity and awareness of sound categories impact speech, music, and reading skills in individuals with and without congenital amusia and developmental dyslexia.

Funding Notes: Candidates should have a first or strong 2.1 degree in psychology or neuroscience and a distinction or high Merit in a relevant Masters qualification would be advantageous. The candidate should have a demonstrable interest in the topic and strong written and oral communication skills.

https://research.reading.ac.uk/caasd-project/

PhD projects in Perception and Action, Development, Autism

Supervisor: Dr Cathy Manning (c.a.manning@reading.ac.uk)

Atypical responses to sensory information have been reported in almost all developmental conditions, including autism and dyslexia. These sensory processing differences can have a huge impact on people's everyday lives. For example, autistic children may struggle to learn effectively if they are very sensitive to the fluorescent lights or the background noises in a typical classroom environment. My research has aimed to uncover the reasons for atypical responses to sensory information in both autism and dyslexia, considering different processing stages from early sensory processing to later decision-making processes. I primarily use a combination of psychophysics, EEG and computational modelling. Cross-syndrome comparisons are particularly informative for understanding how different developmental conditions overlap or diverge. I am interested in supervising projects related to attentional, perceptual and/or decisional processes in autism, dyslexia, and/or other neurodevelopmental conditions. I am also interested in supervising projects relating to how these processes develop in typically developing children.

Please get in touch (c.a.manning@reading.ac.uk) to discuss potential projects which fit with

your interests. To give you an idea, example projects include: a) investigating links between sensory processing assessed in the laboratory and everyday sensory processing, b) investigating links between decision-making parameters and symptom dimensions relevant to neurodevelopmental conditions (e.g., reading abilities, attention), c) comparing performance between autistic and dyslexic children in a range of tasks, d) investigating links between motion perception and movements in typically and atypically developing children, and e) investigating EEG markers of atypical sensory processing and/or decision-making in developmental conditions.

https://catherinemanning.weebly.com/

Reward processing, anhedonia and depression in adults and adolescents

Supervisor: Prof Ciara McCabe (c.mccabe@reading.ac.uk)

In our research group we are interested in how the brains response to reward and aversion might be a biomarker for risk to depression in adults and adolescents. We use a variety of techniques to test this using neurocognitive methods. A PhD in our lab will provide a firm grounding in both cognitive tasks measuring reward responses and fMRI data collection and analysis with a view to achieving publications. You would join a team of undergrads, MSc and PhD students all working on reward related projects but you would also have scope to develop your own PhD ideas. We have exceptional imaging facilities and computing suites to undertake this work. The lab are also interested in psychopharmacological and psychological interventions and how these interact with the brains reward system in relation to psychiatric disorders. A background in computation is ideal but not essential.

https://www.mccabe-nrg-lab.com/

PhD projects in Perception and Action, Cognitive Control, Clinical Language Sciences and Speech production

Supervisor: Dr Fatemeh Mollaei (f.mollaei@reading.ac.uk), Aileen Ho

Implicit and explicit processes in speech disorders of Parkinson's disease.

You can find out more information about our research here:
https://research.reading.ac.uk/neurodegenerative-diseases/

PhD projects in Language and Bilingualism and Reading

Supervisor: Dr Rachel Pye (rachel.pye@reading.edu.my)

In our research group we are interested in reading in multilingual environments; developing tests for dyslexia in multilingual environments; visual aspects of dyslexia.

Integrating the senses in virtual reality

Supervisor: Dr Peter Scarfe (p.scarfe@reading.ac.uk)

Virtual reality systems are fundamentally altering how we study human sensory perception. Similarly, to build good virtual reality systems we need a clear understanding of how the brain integrates sensory information into a robust and useful percept. One area where this is particularly important is in the design and use of robotic telepresence systems, which allow a user to work safely in remote or hazardous environments. This highly interdisciplinary project will investigate the way in which brain integrates information from vision and touch and how these mechanisms adapt over time with experience. The particular focus will be on using this knowledge to address real-world problems in virtual reality and haptic robotics as part of a

wider multi-university and industry collaboration (Robotics and AI in Nuclear, https://rainhub.org.uk). The project will involve state of the art virtual reality and custom-made haptic robotics. It would be ideal for a student who is interested in technology and the way in which fundamental research in Perceptual Psychology can be used to solve real-world problems.

Processing faces in 3D

Supervisor: Dr Peter Scarfe (p.scarfe@reading.ac.uk)

Social interactions are becoming and more integral part of virtual and augmented reality experiences e.g., purchase of Oculus VR by Facebook. This trend it only set to continue at an accelerated pace in the future. However, surprisingly little research has been carried out on how faces are perceived in 3D environments. Instead, the majority of face perception studies are carried out with 2D photos of faces, this greatly limits the application of this research to current and emerging technologies. This project will aim to extend face perception research by examining how information is processed from 3D faces in virtual reality with 3D scans of faces. The project is cross-disciplinary and will be co-supervised by Dr. Katie Gray.

Improving tumour delineation with virtual reality and haptic robotics

Supervisor: Dr Peter Scarfe (p.scarfe@reading.ac.uk)

Tumour delineation is a critical part of the treatment of cancer. However, there is large variability in the delineation of tumours across clinicians. This is a key problem to be solved in providing treatment to patients. There is ample evidence that perceptual tasks can be improved when multiple sources of sensory information are available e.g., information from both vision and touch. This project examine how the detection and delineation of tumours in medical imagine data can be improved by augmented visualisation with virtual reality and haptic robotics. This project will build upon the labs ongoing research with Dr. Alan McWilliam at the University of Manchester / Christie Hospital Manchester.

How do humans understand "how the world works"?

Supervisor: Dr Peter Scarfe (p.scarfe@reading.ac.uk)

From a very young age humans gain the ability to use knowledge of "how the world works" to make predicts about future states of the world and the consequences of their actions within it. For example, a toddler understanding that rolling a ball into a pile of wooden block will knock the blocks down. Similarly, someone can tickle us, but we cannot tickle ourselves. How are these things possible? This project will examine human understanding of physical concepts such as gravity and kinematics and how this understanding shapes the way in which sensory information is calibrated, integrated and use to perceive the world around us.

http://www.peterscarfe.com

PhD projects in Clinical Language Sciences

Supervisor: Prof Vesna Stojanovik (v.stojanovik@reading.ac.uk)

Language and communication in individuals with genetic disorders (Down syndrome, Williams syndrome), intervention for children with language disorders, clinical markers of developmental language disorders (in different languages), monolingual and bilingual language acquisition

PhD projects in Cognitive Control, Language and Bilingualism and Clinical Language Sciences

Supervisor: Prof Hannah Thompson (h.e.thompson@reading.ac.uk)

Topics relating to the impact of stroke aphasia, such as higher-level cognition.

PhD projects in Cognitive Control, Clinical Language Sciences, Neuropsychology

Supervisor: Dr Hannah Thompson (h.e.thompson@reading.ac.uk)

Projects exploring the impact of stroke on cognition, particularly those with aphasia. Current projects explore the relationship between executive dysfunction, semantic memory deficits and creativity in those with left hemisphere lesions.

https://scholar.google.co.uk/citations?user=yCryLmQAAAAJ&hl=en

Emotion regulation in body and brain

Supervisor: Prof Carien van Reekum (c.vanreekum@reading.ac.uk)

Individuals vary greatly in how well they can regulate their emotions, and difficulties in emotion regulation have been linked to resilience and emotional disorders. In my lab, emotion regulation is broadly defined, and encompasses the study of reappraisal, emotion flexibility, threat extinction and temporal aspects of emotional responding, including emotional recovery. Questions that can be asked include: What is the neural overlap between threat extinction and reappraisal of threat? What are the different neural and psychological processes that allow some individuals to respond adaptively while others fail to do so? What (emotional) disposition characterises individuals who have trouble with threat extinction or emotion regulation? Can we identify individuals who are more resilient based on temporal aspects of emotional responding or flexibility in emotion regulation? What corticolimbic interaction supports emotion flexibility? Can we overcome any issues with emotion regulation with training or with biofeedback? Are bodily awareness and emotion regulatory ability associated? Does cognitive capacity play a role? Does emotion regulatory ability decline with advancing age – what is the "tipping point"? A PhD project focusing on aspects under the "emotion regulation" umbrella as defined above can use a mixture of psychophysiology (i.e. heart rate, skin conductance, muscle tension) and/or brain imaging (FMRI or EEG). The specific topic and population studied will be further defined based on mutual interest, expertise and the Ph.D. candidate's research experience to date. Please note, given the biological psychology/neuroscience focus of research in my lab, prior knowledge of, or experience with, psychophysiological or neuroscientific methods, and a bit of programming experience will definitely be beneficial.

PhD projects in self-regulation, emotion, attention, and social cognition

Supervisor: Dr Julia Vogt (j.vogt@reading.ac.uk)

The Self-Regulation, Attention, and Emotion Lab examines various topics at the intersection of self-regulation, emotion, attention, and (social) cognition research. We aim to understand how people can achieve their many goals, solve self-control conflicts, and regulate emotions. We currently investigate health-related goals (healthy diet, exercising), prosocial motivations, and emotion-related goals such as coping with negative emotions. Much of our work is based on social-psychological and cognitive models of self-regulation, but we apply our research to consumer, organisational, health, and clinical contexts. We combine a variety of measures such as surveys, behavioural measures, interviews, and basic cognitive tasks. A focus in the lab is on how various goals and emotions impact people's attention to and perception of their environment. Specifically, we study:

(i) The effects of various emotions (e.g., guilt, fear, anger, disgust) on attention, cognition, motivation, and behaviour: We aim to understand what emotions motivate people to do and how emotions shape basic attentional and cognitive processes, and behaviour. Examples include guilt and prosocial behaviour or disgust and cleansing. For future projects, we would

also be interested in studying courage and shame.

(ii) Regulation of negative and positive emotions: We apply a motivational perspective in order to understand regulation and coping with negative emotions and the pursuit of positive emotions and happiness. We investigate what motivates people to regulate emotions (or not). We study how attention or the pursuit of emotion-unrelated goals and motivations support or hinder such emotion regulation goals.

(iii) Perception of obstacles and means in goal pursuit and self-control: We study how people perceive and attend to stimuli that could help or hinder achievement of their goals. We test whether the currently active goal tunes attention towards means to achieve the goal but causes blindness to everything else. For instance, do dieters become blind towards unhealthy food? We also investigate when and why people have problems to perceive what helps and hinders achievement of their goals and successful self-control. We currently examine the role of attention and perception in self-control, prosocial behaviour, and intergroup conflict.

Effects of nutrients in the diet on cognitive and mental health across the lifespan

Supervisor: Prof Claire Williams (claire.williams@rdg.ac.uk)

Effects of nutrients in the diet on cognitive and mental health across the lifespan (Williams): Representing one of the most important lifestyle factors, our diet can strongly influence the incidence and onset of cardiovascular and neurodegenerative diseases. A healthy diet is, therefore, an essential factor for healthy ageing. Work in my laboratory investigates the role of various dietary factors (i.e. flavonoids, vitamins, omega-3s, as well as components of the whole diet) on cognitive and mental health throughout the lifespan (from children through to older adults). Research over the last 10-15 years or so has shown that intakes of fruit and vegetables, and other macro- and micro-nutrients are important in early stage brain development and in the prevention of age-related cognitive decline. Our work is typically interdisciplinary in nature combining behavioural measures of cognitive function and mental health with cellular/molecular studies (such as urine and/or plasma analysis of relevant metabolites) and neuroscientific techniques (such as FMD, EEG and MRI).