DISSEVERTATION TOPICS AVAILABLE 2016/2017

This document lists the academic staff available to supervise MSc dissertations for the 2016/2017 academic year, along with a brief statement of research interests, and a description of topics that each staff member is willing to supervise. In some cases, specific projects may be described; in others, a more broad description of a research area is given. In addition to the specific topics suggested, it is possible for you to suggest your own topic to a potential supervisor.

It is up to you to approach supervisors to discuss topics. Your dissertation topic will be negotiated with your supervisor and must be agreed by both parties. Any student can be supervised by any academic staff member, provided that the topic is approved by your taught Programme Director as a topic relevant to your MSc programme.

Once you have agreed upon a dissertation topic with a supervisor, the Programme Director must be informed, and asked to approve the topic. Only then will your project with that supervisor be confirmed.

Your dissertation topic should ideally be confirmed by the end of February, and considerably earlier if the project is complicated or likely to involve special populations (e.g. children, neuropsychological patients) or requires NHS approval.

Please be aware that supervisors might have limited places, so you should not necessarily expect to be accepted for your first choice of project.

The recommended word limit for the dissertation is 8,000 words for taught MSc students, and 25,000 to 30,000 words for MSc by Research students.

The submission deadline for the dissertation is 4pm, Thursday 17th August 2017. Details of how to format the dissertation will be available on the PPLS PG website.
PHILOSOPHY

Dr Matthew Chrisman
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Research Interests
Ethics, Epistemology, Philosophy of Language.

Topics
- Meaning of moral terms
- Nature of agency
- Norms of belief
- Deontic logic
- Theories of meaning
- Environmental ethics
- Direct action and civil disobedience

Dr Alix Cohen
Office: 4.13 (DSB)
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Web: http://www.ppls.ed.ac.uk/philosophy/people/alix-cohen

Research Interests
History of Philosophy, Kantian Ethics, Aesthetics, Philosophy of Social Sciences, Philosophy of the Emotions.

Topics
- Kant
- Hume
- Rousseau

Dr Guy Fletcher
Office: 4.03 (DSB)
Email: Guy.Fletcher@ed.ac.uk
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Research Interests
Metaethics, ethics, political philosophy.
Topics
- Moral Motivation
- Moral Testimony
- Well-Being
- Hate Speech

Dr Alistair Isaac

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Research Interests
History and philosophy of psychology (especially perception and psychophysics),
cognitive science, general philosophy of science, and decision theory, with particular
interest in the topic of representation in each of these areas.

Topics
- Philosophy of perception
- Philosophy of cognitive science
- Scientific methodology
- Probability and decision making

Prof Jesper Kallestrup

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Research Interests
Philosophy of language, epistemology and philosophy of mind.

Topics
- Metaphysics of mind
- Externalism / internalism in epistemology
- Semantic externalism
Dr Inna Kupreeva

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Research Interests
Ancient Greek Philosophy

Topics
- Ancient philosophy
- Medieval philosophy (mind and matter, the problem of knowledge, human action, free will)
- Ancient science and medicine

Dr David Levy

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Research Interests
Moral Philosophy, Wittgenstein, Understanding, Plato, Meaning, Simone Weil, Psychology

Topics
- Moral understanding and phenomenology
- Wittgenstein
- Plato’s moral philosophy

Dr Andrew Mason

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Topics
- Ancient ethics
- Ancient aesthetics
- Theory of virtue
Dr Elinor Mason

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Research Interests
Normative ethics, meta ethics, feminism, moral responsibility

Topics
• Moral responsibility
• Feminism
• Normative ethics

Prof Michela Massimi

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Research Interests
Philosophy of science, history of philosophy, Kant

Topics
• Philosophy of science
• Metaphysics of science
• History of philosophy (especially Kant)

**Available only from January 2017.

Dr Aidan McGlynn

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Research Interests
Epistemology, philosophy of language, philosophy of mind (especially its intersection with epistemology)

Topics
• Epistemology (Entitlement, self-knowledge, knowledge-first)
• Language (Implicature, speech act theory, assertion)
• Feminism (Pornography and free-speech, epistemology, epistemic injustice)
Dr S. Orestis Palermos

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Research Interests
Philosophy of Mind, Epistemology, Philosophy of Science and their intersection

Topics
- Extended Cognition
- Distributed Cognition
- Extended Knowledge
- Group Knowledge
- Emergence
- Dynamicist approach to cognition

In general, any topic at the intersection of epistemology and philosophy of mind and cognitive science.

Dr Pauline Phemister

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Research Interests
History of Philosophy and Philosophy of Nature

Topics
- Early Modern Philosophy (Descartes to Leibniz): metaphysics, epistemology, philosophy of nature, philosophy of mind, ethics, aesthetics
- Ecological philosophy

Dr Bryan Pickel

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Research Interests
Metaphysics, Philosophy of Language, History of Analytic Philosophy
Topics

- Variables and Quantifiers
- Belief Ascription
- Ontological Commitment
- Problem of Universals
- Frege, Russell, Moore, Quine

Dr Brian Rabern

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Research Interests
Philosophy of language, formal semantics, philosophical logic.

Topics
- Indexicality and context-dependence
- Two-dimensional semantics
- Dynamic semantics
- The semantics of names, variables, quotation, and epistemic discourse
- The semantic paradoxes

Dr Debbie Roberts

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Research Interests
Metaethics and metanormative philosophy, normative ethics, philosophy of law.

Topics
I’m happy to supervise any topic that falls within my research interests, as well as topics that are at the intersection of ethics / metaethics and any other area of philosophy.
Prof Dory Scaltsas

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Research Interests
Ancient Greek philosophy and ancient Chinese philosophy.

Dr Anders J. Schoubye

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Research Interests
Philosophy of language, formal semantics and pragmatics, philosophical logic, epistemology.

Topics
- Semantics of quantifiers, referential terms (e.g. names, pronouns, descriptions), and modals (e.g. epistemic and deontic modals, propositional attitude verbs)
- The nature of presuppositions and implicatures
- The distinction between semantics and pragmatics
- Other topics in philosophy of language / formal semantics / philosophical logic

Dr Wolfgang Schwarz

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Research Interests
Formal Epistemology, Metaphysics, Philosophy of Language, Logic.

Topics
- Decision theory
- Bayesian epistemology & confirmation theory
- Conditionals
- Semantics of context-dependence
- Nature of mental and linguistic content
- Metaphysics of modality (laws of nature, chance, "metaphysical" modality)
Dr Martin Smith

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Research Interests
Epistemology and logic.

Topics
I’d be happy to consider supervising theses in most topics within my research areas.

Dr Mark Sprevak

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Research Interests
Philosophy of mind, philosophy of science, metaphysics, and philosophy of language, with particular focus on the cognitive sciences.

Topics
• Computation and computational theories of mind
• Extended and embodied cognition
• Artificial intelligence
• Mental representation
• Consciousness
• General philosophy of science
• Foundations of cognitive science
• Bayesian inference

Dr Patrick Todd

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Research Interests
Free will, moral responsibility, metaphysics, ethics, philosophy of religion.

Topics
• Free will and determinism
• Moral responsibility
• Blame and praise
• Fatalism
• Truth and time
• Presentism and grounding
• The coherence of theism (esp. omniscience)

Dr Tillmann Vierkant

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Research Interests
Philosophy of Mind, Free Will, Mental Actions, Consciousness, Implicit / explicit mental processing, Neuro-ethics, Philosophy of Psychology and Cognitive Science.

Topics
• Agency and the will
• Self-control
• Mental Actions
• Two Systems & Cognitive Control
• Social Cognition
• Metacognition

Dr Dave Ward

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Research Interests
Philosophy of mind and cognitive science

Topics
• Philosophy of Mind
• Philosophy of Cognitive Science
• Enactivism

I’m happy to supervise any topic pertaining to the relationships between perception, agency and understanding, and most topics in embodied and enactive approaches to the mind. I’m also interested in Hegel, Nietzsche, Merleau-Ponty, narrative understanding, and naive realist or relational approaches to perceptual experience.
Prof Sharon Abrahams

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Principal Research Grouping
Human Cognitive Neuroscience

Research interests
Clinical neuropsychology (executive and memory functions, social cognition, behaviour abnormalities) in neurodegenerative disease. Please email me early for clinical projects.

Topics

- **The Edinburgh Cognitive and Behavioural ALS Screen (ECAS) – Brief**

Co-supervised by Dr Tom Booth. The ECAS is a new screening measure designed to detect cognitive and behavioural impairments in people with physical disability. This study will use Item Response Theory to analyse previously collected dataset of 100 Motor Neurone Disease patients in order to determine which items within the task are the most sensitive to cognitive and behavioural impairment. The study will aim to develop an abbreviated scale. The study is suitable for a student who enjoys statistical methods!

- **Information Processing Speed in Multiple Sclerosis (MS)**

Co-supervised by Dr Peter Connick, Senior Clinical Research Fellow, CCBS. There are two suggested MSc projects with the following aims: A) To explore how specific information processing deficits relate to higher level cognitive abilities and clinical variables in MS. B) To investigate the psychometric properties of novel tests of information processing speed in MS and to determine clinical applicability.

Students who wish to undertake these projects will need to undergo Disclosure Scotland and apply for an NHS research passport and so it is advised to start this process early. The project may involve both analyses of previously collected data, and data collection for patients and controls. The student may also be encouraged to help with the design of their projects.

- **Measuring Effort in Dementia Assessment**

For ten years neuropsychological assessments, including measures of effort, have been carried out as part of Fife Memory Clinic for Younger People, to assist in the diagnosis of neurodegenerative conditions such as Alzheimer’s Disease and
Frontotemporal Dementia. There is a poor evidence base for the use of measures of effort in neurodegenerative diseases. This project will investigate the predictive value of measures of effort against standard clinical neuropsychological assessment, through a review of cases from the clinic. Given the project involves a review of clinical notes the student who wishes to undertake this project will need to undergo Disclosure Scotland and apply for an NHS Research Passport, and so it is advised to begin this process early.

- **Computerised Cognitive Rehabilitation**

This study will trial a new computerised cognitive rehabilitation package within an inpatient setting. The study is being co-supervised by Dr Blanca Poveda (Clinical Neuropsychologist) at the Astley Ainslee hospital. The study aims to look at whether improvements in standard neuropsychological tests, functional and awareness measures are found. This project is suitable for 2 students with advanced knowledge of statistics and an interest in computerised cognitive rehabilitation.

- **Dissertation Projects in Clinical Psychology**

Projects within the clinical psychology department may also be available, please contact me if you are interested in being supervised by a member of the clinical psychology department.

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**Dr Bonnie Auyeung**

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Research interests
Autism, early child development (social and cognitive development, neural development, eye gaze), sex differences, neurodevelopmental outcomes

Topics
- Infant and early child social and cognitive development
- Neurodevelopmental sex differences
- Autism and developmental disorders
- Development of new measures of social and cognitive behaviour

Dr Nic Chevalier and I offer opportunities for co-supervised MSc dissertations on cognitive and/or social-affective development in children.
Dr Thomas Bak

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Research interests
Cognitive effects of bilingualism across the lifespan, translation and adaptation of cognitive and motor tests into different languages and cultures, the interaction between movement, language and cognition in neurodegenerative diseases

Projects

- The interaction between motor functions, language and cognition in neurodegenerative diseases

This research has been made extremely difficult through the growing bureaucratic hurdles associated with obtaining “research passport”, needed to work with patients and/or non-anonymised databases (except for those with a degree in medicine, in which case it is easier). It is, however, possible to work with existing data, particularly if they are anonymised. Over the last years I have supervised several projects related to a new screening test I have developed, Edinburgh Motor Assessment (EMAS) and its relationship to clinical data and biomarkers (this has led to several poster presentations at international conferences). I have also a collection of written picture descriptions, for those interested in language analysis. Finally, I have also supervised studies of clinical populations outside the UK (and hence not needing the research passport), if students have access to them (e.g. adaptation of cognitive tests into other languages and cultures etc).

Bak TH Why patients with dementia need a motor examination? (2016) JNNP, Published on-line 3 June 2016.


- The impact of bilingualism on cognitive functions across the lifespan and in brain diseases

The interest in the cognitive impact of bilingualism in the context of “cognitive reserve” has increased dramatically in recent years. For the last three years I have been working on many aspects of it, including short and long-term effects of active and passive bi-/multilingualism, of switching between languages, of learning a new language etc. I have been examining young adults, healthy elderly and patients with dementia and stroke in Scotland, India, Singapore and Malta. More recently, I started working on language learning as a cognitive training for patients with dementia.

Because most of this work does not require NHS permissions as in (1), there is a lot of
.flexibility in the choice of research questions, study design and populations to be studies. Projects can be tailored to match skills and interests of individual students.


**Bak TH.** Cooking Pasta in La Paz: bilingualism, bias and the replication crisis (2016) *Linguistic Approaches to Bilingualism*. Published on-line 1 July 2016.


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**Prof Tim Bates**

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Principal Research Grouping
Differential Psychology and Human Cognitive Neuroscience

Research interests
My work uses experimental methods and behavior genetics. Particular foci include variables linked to attainment and social status (education, dyslexia, IQ, Conscientiousness), and non-cognitive traits (positive psychology and attitudes). We have a number of twin datasets with many hundreds of phenotypes for you to work on.

Topics
- Positive Psychology: Optimism, Need for cognition, Persistence, cooperation in groups
- Experimental work on factors that influence attainment: Intervention trials

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**Dr Tom Booth**

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Research interests
My research interests include quantitative methods (particularly latent variable
models, structural equation modelling and scaling methods), psychometrics and personality theory and measurement. I am interested in the development and decline of individual difference traits, group differences, and how traits influence life outcomes, particularly health and in the workplace. Some of my recent work has also been focussed on the relations between individual differences and allostatic load (the wear and tear on the body over time due to the stress response.

Topics
I would be interested in supervising projects around any of the topics listed above. I would encourage students who have ideas around individual differences and health to come and have an informal chat. I have a number of psychometric projects which would be suitable for MSc dissertations.

Prof Holly Branigan

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Principal Research Grouping
Language, Cognition and Communication

Research interests
My main interests are in language production in adults, children and bilinguals, particularly relating to syntax (what are the processes and representations involved in combining words to form complex expressions? how do children and non-native speakers acquire and develop these processes and representations, and how do they differ from those of adult native speakers?) and communication in dialogue, including human-computer interaction (how do people adapt their language to fit their conversational partners? what kind of evidence do they use to make inferences about what their partner knows?).

Projects
I would be interested in supervising any dissertation relating to language production or dialogue from a cognitive perspective. Please note that research involving children must be organised well in advance. Some example project areas are listed below:

- Structural priming in children
- Alignment in human-computer interaction
- Cross-linguistic interference in bilingual production
- Syntactic processing in children's language production
Dr David Carmel

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Principal Research Grouping
Human Cognitive Neuroscience

Research interests
I am interested in the cognitive neuroscience of consciousness and perceptual awareness. I investigate the neural and psychological processes that give rise to awareness of perceptual (most often visual) stimuli, and what sorts of perceptual processing can occur without awareness. I also examine how conscious and unconscious perception interact with other processes such as attention, emotion and working memory. To do so, I employ non-invasive brain stimulation (transcranial magnetic stimulation [TMS] and transcranial direct current stimulation [tDCS]), behavioural methods, and physiological measures (skin-conductance). I am happy to supervise any of the projects below, or discuss any other ideas that fall into my general area of interest.

Topics
- The involvement of high-level brain regions in visual awareness

Our perceptual systems constantly try to comprehend sensory inputs. Bistable stimuli, which give rise to more than one possible percept, thus serve as invaluable tools for understanding the mechanisms underlying conscious perception: An unchanging stimulus leads to alternating percepts; as the only change happening is within the brain, understanding this process can shed light on the mechanisms that determine how the brain selects information for conscious awareness. Neuroimaging studies have shown that high-level brain regions – right parietal and frontal cortex – are involved in bistable perception. However, such correlational findings cannot establish what causal role (if any) these regions play. The next step, therefore, is to manipulate brain activity in these regions and measure the effects this has on bistable perception. This year I am offering a project aimed at establishing the precise role these areas play in shaping visual awareness: We will use TMS (transcranial magnetic stimulation) to influence activity in parietal cortex, and examine the effect this has on awareness of complex bistable images. The project will require collaboration between two students.


• **Learning to become aware**
  
  One of the most popular ways to investigate unconscious perception is by using backward masking, in which a visual stimulus is presented briefly, and is rendered invisible by another image (the mask) presented immediately afterwards. Does such suppression remain effective over time? This is an important question, as the consistent efficacy of this technique is a basic assumption in a large number of studies investigating unconscious perception. The brain is known to be extremely adaptive, however, and may learn to boost the signal from the suppressed image with repeated exposure. Indeed, in a study carried out last year my students and I found that masking becomes weaker over time, such that the suppressed image becomes more likely to break into awareness. In this year’s study, we will explore the role of sleep, which is known to be important for the consolidation and strengthening of learning.

• **Visual crowding: effects of attention, familiarity and emotion**
  
  When a stimulus is placed on its own in the near periphery of the visual field, it is often easily recognizable; but when it is flanked – or ‘crowded’ – by similar stimuli, it becomes impossible to identify. For example, look at the plus sign below, and see how difficult is to identify the central ‘a’ on the right, but how easy it is to do so on the left, despite the fact that they are the same distance from the plus:

  \[ \text{a + dak} \]

  Although the crowded stimulus is not consciously recognized, it can give rise to aftereffects and priming, meaning that crowded stimuli can be processed unconsciously, at least to an extent. Crowding is modulated by various factors - both low-level features and high-level psychological processes like attention. How these interact is unclear, though. This psychophysical project will examine whether the effect of attention on crowding is independent of the effects of other factors like stimulus familiarity and emotional valence.


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**Dr Nicolas Chevalier**

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Research interests

While working on a project or assignment, you may need to prevent mind wandering and ignore the temptation to check your emails and Facebook page. Efficient control over your thoughts, actions and emotions will help you stay on task and get it done. In contrast, children tend to be “all over the place”, not exerting cognitive control (also referred to as executive functioning) as well as do adults. Yet, emerging cognitive control during childhood is one of the best predictors of academic achievement and later life outcomes such as health, income, or criminal records. Impaired cognitive
control is also often observed in developmental disorders such as autism and ADHD. Given the key role of cognitive control in child development, the study of its development has become one of the “hottest” topics in developmental science. My work uses behavioural, eye-tracking, and electrophysiological (ERPs) measures to address how preschoolers and school-age children process environmental information to determine how and when to engage cognitive control.

Projects on cognitive control development will give you the opportunity to learn how to design and conduct an experiment with children of various ages, and to familiarize yourself with the collection and analysis of behavioural (reaction times, accuracy), eye-tracking (e.g., gaze time, pupillometry), and electrophysiological (event-related potentials – ERPs) data.

Dr Bonnie Auyeung and I offer opportunities for co-supervised MSc dissertations on cognitive and/or social-affective development in children.

**Students are advised to contact Dr Chevalier as soon as possible in the academic year for availability**

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**Dr Moreno Coco**

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Principal Research Grouping
Human Cognitive Neuroscience
Computational Cognitive Science

Research interests and Topics
- Language processing (production and comprehension) situated in visual world context, using eye-tracking
- Expectancy and predictive mechanisms of stimulus processing, using EEG
- Cooperative dialogue and dynamics of cognitive alignment and task success
- Visual working memory in healthy aging and neuro-degenerate populations
- Visual attention, scene understanding and the role of contextual information

I am happy to discuss personal projects of students broadly interested in cognitive science, and especially those willing to combine experimental data analysis with computational modelling.
Dr Morag Donaldson

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Principal Research Grouping
Developmental Science

Research interests
Language development and language impairment in children. University students’ study skills.

Topics
• Classroom explanations – how do the types of explanations that are produced in classroom contexts differ between children with language impairments and children with typical language development? This project would involve analysis of a dataset of naturalistic data that has already been collected.
• Production of cohesive devices (e.g., connectives, anaphoric expressions) in children’s speech and/or writing.
• How could university students be helped to improve the coherence and/or clarity of their arguments in written assignments?

I am also happy to discuss students’ own ideas for projects related to my research interests. Research with children takes a lot of time, and so it is important to get started early.

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Dr Alex Doumas

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Principal Research Grouping
Human Cognitive Neuroscience, Language, Cognition and Communication

Research interests
Humans routinely make inductive inferences that far outstrip those made by even our closest primate cousins. Broadly, I am interested in how humans (and non-human machines) develop the kinds of representations that support these inferences. More specifically, I am interested in how systems can and do learn structured relational representations (like above, next-to, or chases). Relational reasoning (reasoning based on the relational roles that objects play rather than the literal features of those objects) is ubiquitous in human cognition, but relational representations are exceedingly difficult to learn. The power of relational representations stems from their promiscuity: Our representation of a relation like more, for instance, can take

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Dr Morag Donaldson

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Principal Research Grouping
Developmental Science

Research interests
Language development and language impairment in children. University students’ study skills.

Topics
• Classroom explanations – how do the types of explanations that are produced in classroom contexts differ between children with language impairments and children with typical language development? This project would involve analysis of a dataset of naturalistic data that has already been collected.
• Production of cohesive devices (e.g., connectives, anaphoric expressions) in children’s speech and/or writing.
• How could university students be helped to improve the coherence and/or clarity of their arguments in written assignments?

I am also happy to discuss students’ own ideas for projects related to my research interests. Research with children takes a lot of time, and so it is important to get started early.

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Dr Alex Doumas

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Principal Research Grouping
Human Cognitive Neuroscience, Language, Cognition and Communication

Research interests
Humans routinely make inductive inferences that far outstrip those made by even our closest primate cousins. Broadly, I am interested in how humans (and non-human machines) develop the kinds of representations that support these inferences. More specifically, I am interested in how systems can and do learn structured relational representations (like above, next-to, or chases). Relational reasoning (reasoning based on the relational roles that objects play rather than the literal features of those objects) is ubiquitous in human cognition, but relational representations are exceedingly difficult to learn. The power of relational representations stems from their promiscuity: Our representation of a relation like more, for instance, can take

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Dr Morag Donaldson

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Principal Research Grouping
Developmental Science

Research interests
Language development and language impairment in children. University students’ study skills.

Topics
• Classroom explanations – how do the types of explanations that are produced in classroom contexts differ between children with language impairments and children with typical language development? This project would involve analysis of a dataset of naturalistic data that has already been collected.
• Production of cohesive devices (e.g., connectives, anaphoric expressions) in children’s speech and/or writing.
• How could university students be helped to improve the coherence and/or clarity of their arguments in written assignments?

I am also happy to discuss students’ own ideas for projects related to my research interests. Research with children takes a lot of time, and so it is important to get started early.

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Principal Research Grouping
Human Cognitive Neuroscience, Language, Cognition and Communication

Research interests
Humans routinely make inductive inferences that far outstrip those made by even our closest primate cousins. Broadly, I am interested in how humans (and non-human machines) develop the kinds of representations that support these inferences. More specifically, I am interested in how systems can and do learn structured relational representations (like above, next-to, or chases). Relational reasoning (reasoning based on the relational roles that objects play rather than the literal features of those objects) is ubiquitous in human cognition, but relational representations are exceedingly difficult to learn. The power of relational representations stems from their promiscuity: Our representation of a relation like more, for instance, can take

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Dr Morag Donaldson

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Principal Research Grouping
Developmental Science

Research interests
Language development and language impairment in children. University students’ study skills.

Topics
• Classroom explanations – how do the types of explanations that are produced in classroom contexts differ between children with language impairments and children with typical language development? This project would involve analysis of a dataset of naturalistic data that has already been collected.
• Production of cohesive devices (e.g., connectives, anaphoric expressions) in children’s speech and/or writing.
• How could university students be helped to improve the coherence and/or clarity of their arguments in written assignments?

I am also happy to discuss students’ own ideas for projects related to my research interests. Research with children takes a lot of time, and so it is important to get started early.

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Dr Alex Doumas

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Principal Research Grouping
Human Cognitive Neuroscience, Language, Cognition and Communication

Research interests
Humans routinely make inductive inferences that far outstrip those made by even our closest primate cousins. Broadly, I am interested in how humans (and non-human machines) develop the kinds of representations that support these inferences. More specifically, I am interested in how systems can and do learn structured relational representations (like above, next-to, or chases). Relational reasoning (reasoning based on the relational roles that objects play rather than the literal features of those objects) is ubiquitous in human cognition, but relational representations are exceedingly difficult to learn. The power of relational representations stems from their promiscuity: Our representation of a relation like more, for instance, can take
any possible arguments (e.g., the dog can weigh more than the cat, the winnings can be more than the losses, and the relative neatness of one particular cartoon alien can be more than the neatness of another particular cartoon alien). In other words, the representation of the relation is invariant with respect to its arguments. However, we never actually experience generalised instances of relations in our environments. Our experience of relations in the world occurs only in the context of specific objects. So, our representation of a relation like more is disembodied, or untied to any specific objects, but our experience with more-ness in the world has precisely the opposite property.

How, then, do we learn these kinds of relational concepts? How is it that children by (roughly) the age of 5, reason about many relational concepts like experts, while no non-human animal seems able to even approximate truly relational thinking? In my lab we use both empirical (with children and adults) and computational methods to get at answers to these and other related questions.

Topics
- Relational reasoning
- Development of relational reasoning
- Capacity limits in human relational reasoning
- Training regimens and acquisition of relational concepts

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**Dr Sue Fletcher-Watson**

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Research interests
Autism; social cognitive development; infant cognitive development; technology based support and education.

Topics
I have three specific topics available for suitable candidates in 2016/17
- Analysis of an existing data set collected from convicted prisoners in Scotland to explore the prevalence of a range of traits (e.g. IQ, ASD-traits, emotion recognition) and experiences (e.g. head injury, alcohol use, special education status) against population norms
- Development and validation of a large battery of ‘social’ images depicting not just human content but other forms of social information (i.e. culturally or emotionally significant items and locations) via verbal descriptions and / or eye-movement recording
- Novel analysis of existing eye-tracking data from typical infants and infants born pre-term exploring early cognitive development in this population (a range of different analyses can be undertaken here: e.g habituation; mean fixation length; comparison of 2-d (animated) and 3-d (filmed) memory task versions.)
**Prof Catharine Gale**

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Principal Research Grouping
Centre for Cognitive Ageing & Cognitive Epidemiology

**Research interests**
My areas of expertise are cognitive and life course epidemiology. My main research interests are the relationship between cognitive ability in youth and subsequent health, life course influences on cognitive ageing and the development of physical frailty, and the part played by mental health and wellbeing in later health outcomes. I’m also interested in how personality traits affect health outcomes.

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**Dr Paul Hoffman**

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**Research interests**
I am interested in how the brain represents semantic knowledge (verbal and non-verbal knowledge about the world) and how we regulate our use of this knowledge in different situations (for example, the knowledge involved in playing a piano is different to that required for moving a piano). I use a variety of techniques including neuropsychology, psycholinguistics, neuroimaging and connectionist computational modelling. My current focus is on semantic influences in natural speech production.

**Projects**
- The effect of a secondary task on access and manipulation of word meanings – This project would explore how we process the meanings of words under conditions of divided attention.
- Properties of natural speech in young and older adults – I have a corpus of speech samples from young and older people which is ripe for secondary data analysis. Options include investigation of the lexical and semantic properties of words used by people of different ages.

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**Dr Wendy Johnson**

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Principal Research Grouping
Differential Psychology

Research interests
Individual differences: structure of intelligence and personality, life-span development of intelligence and personality, health and aging, genetic and environmental transactions and their influence on behavior, intelligence, and personality

Topics
Pretty much anything, but especially anything related to intelligence, personality, academic achievement, health outcomes (mental and physical), genetics, sample selection, cognitive and physical ageing, or education. I could supervise any of the research methodology students. Many students who work with me will end up using archival data from existing studies. While this simplifies the data accumulation process considerably, these projects usually make it up in complexity of statistical analysis. Students working with me should have solid basic analytical skills and willingness and ability to acquire more.

Dr Billy Lee

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Principal Research Grouping
Language Cognition and Communication

Research interests
I am interested in Phenomenological Psychology and use experience-near qualitative methods to explore and to understand people’s lived experiences. I welcome proposals for projects to explore gender, identity, sexuality, relationships, mental health, well-being, therapy and counselling, and other areas of marginal or different experience. I am currently exploring understandings of the talking therapies and the development of therapeutic talking and listening in counsellors.

Topics
• Gender, identity and sexuality
• Mental health, relationships and well-being
• Psychotherapy, counselling and social communication
Prof Robert Logie

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Principal Research Grouping
Human Cognitive Neuroscience

Research interests
Research and teaching interests lie in the cognition of human memory in the healthy brain across the lifespan, focused on experimental behavioural studies of working memory.

Topics
I am available to supervise MSc projects next summer using cognitive, behavioural, experimental approaches to the study of any area of human memory.

Dr Steve Loughnan

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Web: http://www.ppls.ed.ac.uk/people/stephen-loughnan

Research interests
The psychology of attributing humanity and moral concern to people (dehumanization, objectification) and to animals (anthropomorphism). The psychological impact of inequality and scarcity.

Topics
The psychology of attributing humanity and moral concern to people (dehumanization, objectification) and to animals (anthropomorphism). The psychological impact of inequality and scarcity.

Dr Michelle Luciano

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Research interests
I study the genetic (quantitative and molecular) and environmental determinants of behaviour, e.g., cognitive ability, personality, mood, and well-being. My research utilises established population based cohorts where data are already available, so you will be expected to undertake more complex statistical analysis in lieu of data.
collection. I am happy to supervise students’ own projects in this area.

Topics
If you are short on ideas, here are a couple:

- **Religion as moderator of well-being heritability and of the personality-happiness relationship**

You will address this topic using data from the Midlife in the United States (MIDUS) study on health and well-being. Religiousness is positively associated with subjective well-being, a trait that shows genetic influence. No study has tested whether the heritability (i.e., genetic influence) of well-being is moderated by religion. A twin design can be used to answer this question. Personality traits have also been shown to correlate with subjective wellbeing, but might these relationships also be modified by religion?


- **Combined effects of APOE genetic variation and cognitive ability on Body Mass Index**

Roles for both dementia- and APOE-associated changes in BMI during the adult life course have been shown. The proposed study will test whether this effect can be detected by using cognitive ability scores rather than dementia and whether the effect is found in men and women. Participants will be drawn from the Lothian Birth Cohorts, who are aged over 70 years and have been measured longitudinally for BMI, as well as genotyped for APOE.


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**Dr Sarah MacPherson**

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Principal Research Grouping
Human Cognitive Neuroscience and Centre for Cognitive Ageing & Cognitive Epidemiology
Research interests
My research interests are the assessment and understanding of frontal lobe functions such as memory, executive abilities and social cognition and how they are affected by healthy adult ageing and brain damage. I am happy to discuss the supervision of other potential projects related to my research, in addition to the topics below.

Topics
- Factors influencing source memory performance in healthy ageing.
- The examination of semantic and acoustic verbal fluency data in healthy ageing.
- Understanding cognitive estimation performance in aging.
- The influence of rewards on performance on frontal executive tests.
- The ecological validity of social cognition assessment in healthy aging?
- The assessment of multitasking abilities in healthy adult aging.

Dr Rob McIntosh

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Human Cognitive Neuroscience

Collaborator: Dr. Gavin Buckingham, University of Exeter.

Summary: When we lift objects, we experience their weight, based on kinaesthetic feedback from the hand and arm. But we also have illusory weight experiences, influenced by the sensory cues available before lifting. For instance, small-volume objects are judged heavier than larger-volume objects of equal weight (size-weight illusion), and an object is judged heavier if its surface appearance makes it seem to be made of a less dense material (material-weight illusion). These counter-intuitive illusions suggest that the predictions that we make (unconsciously) about an object’s weight have a powerful influence on our conscious experience during lifting.

Where in the brain are these predictions generated? To address this question, we have recently tested patient DF, a 62 year-old woman with profound problems of visual object recognition following damage to occipito-temporal visual areas. DF is one of the most famous cases in all of Cognitive Neuroscience. Our data suggest that DF experiences neither the size-weight illusion nor the material-weight illusion, when given sight of the objects prior to lifting; but she does show a robust size-weight illusion when she is allowed to explore them by touch. This pattern, if reliable, has important implications for understanding weight perception. But, in order to test whether the pattern is robust and meaningful, we need to compare DF statistically against sufficiently large samples of healthy individuals performing the same tasks.

This project will use size-weight and material-weight illusions to characterise lifting behaviour and weight perception under different sensory cue conditions, and to provide normative data for statistical comparison against patient DF; there may be an opportunity for further data collection in DF herself. The project will involve motion tracking and force measurement, detailed analysis of these kinematic data, and
specialised case-control statistics for testing neuropsychological dissociations. Full training will be provided in all methods.

**Starter references:**


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**Dr Adam Moore**

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Principal Research Grouping
Human Cognitive Neuroscience

Research interests
- Moral judgement, particularly the cognitive mechanisms that underpin this; the psychology of corruption
- Motivation and the desire for power; influence of individual differences in desire for power on decision making
- Logical reasoning; mental models and probability heuristics models of reasoning

I am also happy to discuss any ideas related to my research or research interests.

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**Dr Alexa Morcom**

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Topics
- **Background on memory and ageing**

As we age, memory for events (episodic memory) seems vivid, but the devil is often in the details: did I take my medication yesterday or only think about taking it? Recall of such details shows a marked decline in even healthy aging, and older adults are often more prone to false memory errors, while their factual knowledge (semantic memory) is relatively preserved.

A fundamental factor in these memory difficulties is impairment in cognitive control
due to loss of integrity of the prefrontal cortex. The proactive, self-initiated regulation of thought and action allows us to think and act independently, without relying on external prompts. Converging data suggest that impairment of this proactive control may be an important contributor to episodic memory decline. In order to optimise older adults memory, forms of ‘support’ have been proposed. One is environmental support (project 2).

References


- **Using ERPs to study proactive memory control**

Although recollection is often triggered by cues in the world around us, people also strategically ‘self-cue’ memory to influence what is brought to mind. However, these processes are difficult to study, since behavioural measures of memory judgments do not distinguish the different stages operating prior to (and after) successful retrieval [see 2]. You will use electroencephalographic event-related potentials (ERPs) to investigate how young and older adults prepare to retrieve specific information from memory, and test whether this preparation varies with individual differences in cognitive control. This is related to work by 2014-15’s MSc project students. A useful starting point is the paradigm developed by Herron and Wilding.

References


- **Ageing, memory cueing and environmental support**

According to Craik’s influential Environmental Support Hypothesis, older adults do better when external prompts assist them, due to their difficulties with self-initiated cognitive control. However, there is little direct evidence regarding the circumstances under which external memory cues help older adults more than the young. In this project you will develop a task in which the effects of internal memory (self-) cueing (e.g., participants’ knowledge that words were all encountered previously with a picture of a beach) and external cueing (re-presentation of that picture of a beach with to-be-remembered words) on young and older adults’ memory can be compared. A database of scene images is available, and some pilot data from a more complex study in young adults to assist with task development.
References

Dr Candice Morey
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Research interests
I study working memory and attention, particularly how, when, and why auditory or verbal and visual representations interfere with each other. I approach these problems using cognitive research methods, eye-tracking, and developmental comparison.

Topics
- Cognitive development of visual memory: The amount of information we can hold in mind at once is quite limited, and it seems to increase from early childhood to adulthood. What is it that increases though? Changes in memory could arise because as children grow up, their capacity to store information becomes larger, or increases could be due to other related factors, like improved selective attention or improved ability to apply strategies to the task of remembering.

- What processes support spatial memory? Discussion of processes that support memory, such as rote verbal rehearsal and chunking, has been supported with study of verbal memory. Are the same processes available to support visual-spatial memory? We would draw on studies of verbal memory to generate predictions about comparable processes that may support spatial memory.

- How do verbal and visual working memory differ? While verbal information is fairly resistant to interference from non-verbal information, memory for visual information appears more fragile. Why is this? The time-based resource sharing model of working memory proposes that verbal information has exclusive access to a specialized rehearsal mechanism that cannot be used to boost memory for visual images. It is widely believed that rehearsing verbal information requires attention initially, but that after a little while rehearsal proceeds automatically. This hypothesis generates novel predictions about how timing of presentation of verbal and visual stimuli should determine whether verbal information interferes with visual information or not.

Students are welcome to meet with me to discuss their ideas related to either of these topics, or to other ideas related to my research interests.
Dr René Mõttus

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Research interests
I am interested in individual differences, mostly on the personality side.

Topics
- Personality development
- Within-individual variability of personality
- Personality and life-outcomes
- Narrow personality characteristics

Dr Antje Nuthmann

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Principal Research Grouping
Human Cognitive Neuroscience

Research interests
My current research interests include perceptual, oculomotor and cognitive control in everyday visual-cognitive tasks like scene perception, object-in-scene search, and reading. I approach these issues with experimental, corpus-analytical, and computational modelling techniques. Because human visual perception involves active information seeking via eye movements, I use eye tracking as my primary behavioural method. I do basic research and do not work with patients.

Topics
- **Eye-movement control during viewing of low-resolution images**

When we look at a natural scene (or at a photograph of a real-world scene on a computer screen), we are not able to see all of the objects or elements in the scene equally well. This is because of visual acuity limitations. For compensation, about three times per second the visual system re-directs our eyes to new areas of the visual scene. The aim of this project is to investigate how different degrees of blurring (low-pass filtering) the scene affect global eye-movement parameters (average fixation duration and saccade length) as well as properties of object-based attentional selection in scenes. The student will learn how to collect data with an eye tracker. Basic knowledge of Matlab (for image processing) and R (data processing) will
facilitate this project.

References:


- How colour guides how we look for objects in real-world scenes: An item analysis

The study is designed to investigate how colour facilitates gaze during real-world search. Previous research has shown that search is faster for colour than for greyscale scenes. The aim of this project is to replicate this finding and to investigate how it depends on the specific items (i.e., photographs of real-world scenes) used in the study. To this end, linear mixed-effects models will be used to assess between-item variability in both search times and fixation durations. The student will learn how to collect data with an eye tracker. A solid background in statistics and interest in R will facilitate this project.

References:

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Prof Martin Pickering

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Principal Research Grouping
Language Cognition and Communication

Research interests
I am interested in language production, comprehension, dialogue, bilingualism, and reading. At the moment, I am particularly interested in studying interactive language as a form of "joint action" (whereby the use of prediction and covert imitation appears to make "smooth" dialogue possible), and in the question of whether interlocutors represent their partners' utterances in the same format as their own. However, I am also interested in "traditional" psycholinguistic questions, particularly as relating to syntax, semantics, and discourse.

Topics
- Joint production of utterances
- Structural priming and language production
- Language switching in bilinguals
Dr Hugh Rabagliati

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Principal Research Grouping
Developmental Science; Language Cognition and Communication

Research interests
Linguistic and conceptual development (e.g., lexical semantic development, relationship between language and thought). The relationship between language acquisition and language processing. Relationships between conscious awareness and language processing in adults. Methods-wise, my group studies child development using iPad apps and eye-tracking studies; we use psychophysical methods to study adults.

Topics
I’m happy to supervise developmental work related to the above topics. I’m also happy to work with students to develop a (feasible) unrelated project. I typically work with children between 6 months to 4 years. Our studies take place at local preschools, at the developmental lab, and at the Edinburgh Zoo.

Dr Stuart Ritchie

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Principal Research Grouping
Language, Cognition and Communication

Research interests
I’m interested in intelligence: how it differs between people and how it changes with age. My previous work has looked at how factors such as education might affect the development of cognitive abilities, and how neuroimaging and genetic variables predict later-life declines in cognitive function. Projects on these topics will have opportunities to use large, longitudinal datasets and to link psychological variables with social and biological measures. They will give you the opportunity to use methods like structural equation modelling to build complex models of these relations across long periods of the lifespan.
Dr Richard Shillcock

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Principal Research Grouping
Language, Cognition and Communication

Research interests
My research interests involve experimental and modelling approaches to understanding normal and impaired isolated word recognition and binocular reading of text; hemispheric interaction; philosophical issues in cognitive modelling and theory construction; the mental lexicon.

Projects

- **Connectionist modelling of hemispheric interaction**

  We will use a neural network simulator to test a hypothesis about the origins of sex differences in cognitive function. Some facility with computers would be desirable; programming not essential. The first reference below describes the data we will attempt to model. The second reference gives the flavour of the intended research.


- **Analysis of an existing eye-movement database**

  We will analyse a novel aspect of a very large database of binocular eye-movements in reading in English, Chinese, Arabic, Hebrew or Spanish, or in English-dyslexic. Some facility with R would be desirable. The first reference below is an example of our theorizing within this domain (but the project would not be at this level). The second reference gives the flavour of some of the effects that amy be apparent in the dyslexics’ data.


• Artificial Grammar Learning

We will employ a new means of presenting AGL stimuli to reinforce a new hemisphere-based interpretation of what is going on in AGL. An in-preparation paper is available on request.

I am happy to talk about students’ individual ideas for projects within the field of eye-tracking or visual word identification.

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Dr Patrick Sturt

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Principal Research Grouping
Language, Cognition and Communication

Research interests
I am interested in the moment-by-moment processes by which people assign meanings to sentences during language comprehension. More generally, I am interested in how people infer a hierarchical structure from linear or sequential perceptual input in linguistic and non-linguistic domains (e.g. in processing linguistic sentences, mathematical formulae, musical phrases, etc). At a more abstract level, I am also interested in the nature of the mental representation of hierarchical structure in language and other domains.

Projects
• Eye-tracking of mathematical expressions: Mathematical Garden Paths
• Incrementality and structural representations in mathematics and language

I am also happy to supervise any other project that falls within my area of expertise, and which I judge to be realistic for an MSc project. Topics could include; the time-course of dependency formation in sentence processing; processing of pronouns and anaphora; processing of non-linguistic structural information; etc. If you have ideas for projects, please come to discuss them with me.

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Dr Alex Weiss

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Principal Research Grouping
Differential Psychology
Research interests
Broadly speaking, I am interested in personality and subjective well-being. I study these via several techniques, especially those that lend themselves to answering evolutionary questions. These include studying these traits in other species (especially nonhuman primates); behaviour genetic studies; and examining relationships between personality and outcomes, including mortality, aging, and depression. I believe more powerful and convincing studies are those that use multiple approaches. I am also interested in multivariate statistical analysis, including factor analysis, structural equation modelling, growth curve analysis, and survival analysis.

Topics
I am willing to supervise students interested in a broad range of questions related to personality evolution.

Dr Sue Widdicombe

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Principal Research Grouping
Language Cognition and Communication

Research interests
I am interested in self and identities, interaction, culture, discursive psychology and conversation analysis, and interviews as interaction.

Projects
I am happy to supervise projects related to any of the topics above (e.g. particular identities, how they are constructed and used as resources in and for interaction); or projects designed to show how some particular business (of making decisions, formulating clients’ problems, developing relationships) gets done through interaction (e.g. in meetings, therapy, internet interaction). I would also be happy to supervise projects that take a discursive psychological approach to youth culture, culture and self, national or religious identities, or self-descriptions. I am also happy to supervise projects looking at the rather particular features of interviews as a vehicle for social scientific research.

Representative publications:

Dr Peter Ackema

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Research interests
Theoretical syntax and morphology

Topics
Happy to supervise any project within my research area, which broadly speaking is theoretical syntax and morphology. I am especially interested in topics that concern the interaction between these two modules of grammar (such as agreement, incorporation, correlations between the inflectional make-up of a language and its syntactic behaviour, lexical integrity effects, phrasal derivation) but any topic that concerns syntax or the 'syntactic side' of morphology is suitable. A lot of my own work is focused on Germanic languages, but I'm certainly happy to supervise topics on other languages as well.

Dr Rhona Alcorn

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Research interests
Middle English linguistics, older Scots linguistics, historical dialectology, the relationship between sounds and spelling, spelling systems in general.

Prof Ronnie Cann

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Research interests
Formal semantics and syntax; the interaction of semantics, pragmatics and syntax; dynamic and non-transformational models of grammar; cognitive and model-theoretic semantics; historical morpho-syntax.
Topics

- The syntax, semantics and / or pragmatics of case-marking
- Syntax and semantics of prepositional and other adjuncts
- Vagueness and context dependence of word and sentence meaning

Dr Vicky Chondrogianni

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Research interests
First and second language acquisition of morphosyntactic phenomena; child bilingualism; language and cognitive development in bilingual children; children with developmental language disorders; sentence processing in bilinguals.

Topics
I am happy to supervise topics related to language and cognitive development in bilingual children and in children with developmental language disorders, as well as to sentence processing of morphosyntactic phenomena (e.g. subject-verb agreement, tense, articles, pronouns, wh-questions, relative clauses) in bilingual children.

Dr Claire Cowie

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Research interests
Language and globalization; World Englishes and English creoles; English in India; variation and change in Indian English; English as a lingua franca especially in call centres; Language attitudes and World Englishes.

Topics
I am potentially able to supervise on a range of topics related to my research interests. I am constructing a corpus of spoken Indian English and would welcome students interested in exploring variation in these recordings.

I am interested in supervising projects connected to the Edinburgh Speaks project: http://www.lel.ed.ac.uk/lel_research/edinburgh_speaks.php.
Dr Jennifer Culbertson

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Research interests
Language acquisition and change, learning biases, typology, (morpho)syntax, computational models of cognition, artificial language learning, grammaticality judgments.

Topics
- Language universals
- Cognitive biases
- Language change / historical linguistics
- Language acquisition

Dr Chris Cummins

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Research interests
I'm interested in how we understand and successfully convey meaning in context, and attempt to address this using psycholinguistic methods. I work on topics including implicature, presupposition, quantity information, and the structure of conversation.

Topics
I'd be happy to supervise on topics in the areas mentioned above.

Dr Joseph Gafaranga

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Web: http://www.ppls.ed.ac.uk/people/joseph-gafaranga

Research interests
Discourse and Conversation Analysis (theoretical and applied); Bilingualism (sociolinguistic and interactional dimensions).

Topics
I am happy to supervise any topics in the above areas of interest.
Prof Nik Gisborne

Office: 2.03 (DSB)

Email: N.Gisborne@ed.ac.uk
Web: http://www.ppls.ed.ac.uk/people/nikolas-gisborne

Research interests
Dependency theory; English syntax; lexical semantics; syntactic change and grammaticalization.

Topics
Happy to supervise in Syntax, Semantics, Syntactic Change; Grammaticalization and World Englishes.

Dr Lauren Hall-Lew

Office: 2.04 (DSB)

Email: Lauren.Hall-Lew@ed.ac.uk
Web: http://www.ppls.ed.ac.uk/lel/people/lauren-hall-lew

Research interests
Sociolinguistics; phonetic variation and change in English

Topics
Happy to supervise any topic related to sociolinguistic variation, language attitudes, or language change. Particularly interested in topics on phonetic variation. Languages of particular interest include all varieties of English, Chinese, Spanish, and any West African (especially Kwa) languages.

I am interested in supervising projects connected to the Edinburgh Speaks project: http://www.lel.ed.ac.uk/lel_research/edinburgh_speaks.php.

Dr Patrick Honeybone

Office: 3.06 (DSB)

Email: Patrick.Honeybone@ed.ac.uk
Web: http://www.ppls.ed.ac.uk/people/patrick-honeybone

Research interests
Historical Phonology, Phonological Theory and Northern Englishes.

Topics
• Phonological theory
• Historical phonology
• The phonology of English: structural, dialectological and / or historical issues
• English in the North of England

Dr Pavel Iosad
Office: 3.08 (DSB)
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Web: http://www.ppls.ed.ac.uk/people/pavel-iosad

Research interests
Phonological theory, in particular featural structure, the phonology-phonetics interface and historical phonology. I am also interested in various topics in historical linguistics and historical dialectology.

Topics
• Categorical vs. gradient patterns in phonology
• Phonological analysis, with particular reference to feature theory
• Historical phonology, including phonological reconstruction
• Using evidence from variation (e.g. dialect variation) to address diachronic issues
• Using evidence from 'traditional' sources (e.g. dialect descriptions, dialect surveys) to address any of the above questions.

My own work is focused on Celtic and Scandinavian languages, so I welcome any projects related to these. I have also worked on Romance and Slavic varieties; in general I am happy to work with any languages you suggest.

Prof John Joseph
Office: 2.08 (DSB)
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Web: http://www.ppls.ed.ac.uk/people/john-e-joseph

Research interests
Language and identities; language and politics; history of linguistics and semiotics.

Topics
Available to discuss with students whatever topics in the above areas they may wish to carry out.
Prof Simon King

Office: 3.11 (IF)

Email: Simon.King@ed.ac.uk
Web: http://www.ppls.ed.ac.uk/people/simon-king

Research interests
Speech synthesis and automatic speech recognition.

Topics
- Speech synthesis for low resource languages or domains, especially using unsupervised machine learning
- Speech synthesis of audiobooks for children, including how to evaluate this with child listeners
- Speech processing to improve the intelligibility of speech, including for hearing aid users
- Any other topic in speech synthesis, including both unit selection and statistical parametric methods

Dr James Kirby

Office: 2.09 (DSB)

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Web: http://www.ppls.ed.ac.uk/people/james-kirby

Research interests
Phonetics, phonetics-phonology interface, microprosody, tone and phonation, sound change, computational modelling, language and music.

Topics
I would be interested in supervising topics relating to any of the areas listed above. I am also happy to suggest potential topics to students who are interested in these broad subject areas, but do not have a specific question in mind.

Prof Simon Kirby

Office: 1.09 (DSB)

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Research interests
Evolution of language; origins and evolution of culture.
Topics
- Computational models of language evolution
- Iterated learning in the experiment lab and online
- The origins of design features of language
- The role of improvisation, interaction and learning in the origin of linguistic structure
- Silent gesture and miniature artificial sign languages
- Evolutionary approaches to emerging sign languages
- Experimental approaches to the cultural evolution of music and art
- Self-domestication and language evolution

Prof Bettelou Los

Office: 3.03 (DSB)

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Research interests
My area of specialisation is diachronic syntax (especially English diachronic syntax, but also more generally), and the role on information structure in syntactic change, in particular with respect to the consequences of the loss of verb-second in English; and comparative information structure and macro-structural planning of the West-Germanic languages English, Dutch and German.

Dr Warren Maguire

Office: 3.07 (DSB)

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Web: http://www.ppls.ed.ac.uk/people/warren-maguire

Research interests
Dialectology, varieties of English/Scots, phonetic and phonological variation and change
Dr Mits Ota
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Web: http://www.ppls.ed.ac.uk/lel/people/mits-ota

Research interests
First and second language acquisition (phonological and lexical development in particular); prosodic phonology; connections between phonetic/phonology and other cognitive domains (e.g., orthography, social cognition, music)

Topics
- The role of linguistic input in early language development (e.g., Do phonological and/or morphological characteristics of infant-directed speech play any role in language development?)
- The relationship between lexical and phonological development (e.g., Do children learn words with certain phonological characteristics earlier?)
- Phonological representations in second language words (e.g., Are non-native contrasts underspecified in second language words? Does our native orthographic system affect the way we process second language words?)

Prof Geoffrey Pullum
Office: 2.23 (DSB)
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Web: http://www.ppls.ed.ac.uk/people/geoffrey-pullum-fba

Research interests
General issues in syntactic theory; the grammar of Standard English; the philosophy of linguistics.

Topics
Happy to supervise any project within my competence, subject to agreement with the student concerned.

Dr Bert Remijsen
Office: 2.22 (DSB)
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Research interests
The phonetics, phonology and typology of suprasegmental contrasts, e.g. tone, intonation, stress, vowel length, and voice quality. Descriptive linguistics, with specific expertise on Austronesian languages, Nilo-Saharan languages, and
Caribbean creole languages.

Topics
I can supervise self-suggested topics within my research focus area, and I may have topics readily available. Dissertation projects I have supervised in the past give a sense of the range - they include "An investigation into prosodic patterns in the Ness dialect of Lewis Gaelic"; "The voice quality distinction in Dinka songs"; "Suprasegmentals in Shilluk nominal morphophonology". The methodologies I am most familiar with are controlled elicitation and acoustic analysis.

Dr Hannah Rohde
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Web: http://www.ppls.ed.ac.uk/people/hannah-rohde

Research interests
Pragmatic and psycholinguistics.

Topics
Happy to supervise topics related to psycholinguistic approaches to questions in pragmatics. Particularly relevant are topics in the establishment of discourse coherence, the contextual cues that guide ambiguity resolution, and the interpretation and production of referring expressions.

Dr Marieke Schouwstra
Office: 1.07 (DSB)
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Research interests
I am interested in the evolution of language, and the emergence of syntactic structure. My own research focuses on laboratory experiments that involve improvisation, learning and communication, to investigate the roles they play in the emergence of language rules.

Topics
I am happy to supervise projects that use the laboratory techniques mentioned above (I may have topics available), but do get in touch if you have your own idea for a topic.
Dr Kenny Smith

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Web: http://www.ppls.ed.ac.uk/people/kenny-smith

Research interests
I am interested in the evolution of communication, human language, and the human capacity for language. I use computational models and experiments with human participants to investigate these questions, simulating (in the computer or in the lab) the processes of language learning, language transmission, and communicative interaction. I'd be interested in supervising dissertations involving these techniques individually (e.g. looking at language learning or language use during communication) or in combination (e.g. how do languages evolve as a result of their learning and use).

I am happy to discuss your ideas, or I can suggest specific research questions and experiments.

Prof Antonella Sorace

Office: 2.02 (DSB)
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Web: http://www.ppls.ed.ac.uk/people/antonella-sorace

Research interests
Language development in child and adult bilinguals; bilingualism and general cognition; gradience at the lexicon-syntax interface. I direct the research and information centre Bilingualism Matters (www.bilingualism-matters.ppls.ed.ac.uk)

Topics
I would be interested in supervising dissertations (by myself or in collaborations with colleagues in LEL or Psychology) on the following areas/topics:

* Early (child) bilingualism

Age effects in child bilingualism. Interactions of age of onset and type of input exposure. Interface conditions on syntactic realization, especially at the syntax-pragmatics interface (e.g. anaphoric forms) and at the syntax-lexicon interface (e.g. intransitive verbs and unaccusativity).

* Late (adult) bilingualism

Limits of adult L2 ultimate attainment; linguistic and cognitive characteristics of very advanced (near-native) L2 speakers. Language and processing in late bilinguals. Effects of L2 on L1; comparison of advanced L2 acquisition and individual L1 attrition; L1 attrition in first and second-generation speakers.
• **Language and general cognition in early and late bilingualism**

Is there a ‘bilingual advantage’ for general cognition in late bilinguals? Effects of bilingualism vs. multilingualism on general cognition. Bilingualism in minority languages. Bimodal (signed + spoken language) vs. unimodal bilinguals.

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**Dr Graeme Trousdale**

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**Topics**

• Constructional approaches to language variation and change
• Morphosyntactic variation and change in British English dialects

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**Dr Rob Truswell**

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**Research interests**

Syntax, semantics, linguistic interfaces, syntactic change, language evolution, history of English.

**Topics**

I am happy to discuss topics in any of the above areas, but currently particularly interested in:

• the relationship between language change and language typology
• event structure
• syntax and semantics of relative clauses
• syntax and semantics of pronouns and binding
• quantifier scope
• corpus-based analysis of grammar change

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**Dr Linda Van Bergen**

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Web: [http://www.ppls.ed.ac.uk/people/linda-van-bergen](http://www.ppls.ed.ac.uk/people/linda-van-bergen)
Research interests
English historical syntax (especially word order and negation), old and middle English language

Topics
I am happy to supervise most topics that focus on an aspect of the history of the English language.