



SEERC – Call for PhD Applications 2018-2019.



PhD Studies at SEERC – Call for Applications (Submission Deadline: June 22, 2018)

1. The PhD Programme

SEERC gives the opportunity to qualified students to read for a Doctoral Degree at the University of Sheffield through a combination of high quality UK studies and a unique research infrastructure in South East Europe. The PhD candidates are enrolled and study at one of the Departments of the Faculties of the University of Sheffield in the UK while being supported by the SEERC team and infrastructure in SEE. When they successfully finish their studies they receive their degrees directly from the relevant Department at Sheffield, UK.

At SEERC there are currently two possibilities for a PhD degree:

A) Full Time programme. The duration is 3 years (with a 4th year available for writing up the thesis) and it requires full time commitment on the part of the PhD student, which means that one would have to be physically present at SEERC premises located in Thessaloniki.

B) Part Time programme. with duration 6 years (with 2 years available for writing up). To be eligible for a part-time PhD the candidate should be able to prove significant experience in the selected field. In this case, the PhD student has the obligation for a minimum of two visits to Thessaloniki and/or Sheffield annually for supervision purposes. All other communication with supervisors occurs via e-mail, Skype and telephone.

Students applying for the programme (Full time and Part time) must have an excellent academic record (normally Degrees with Distinction) and should possess a Master's Degree. Potential work experience, research training and publications play important role also. Applicants for part time positions must submit proposals that demonstrate a clear linkage between their current work and their PhD topic.

2. Entry Requirements

The University has clear minimum entry requirements. These are the following:

- A relevant first Degree (Normally with Distinction)
- A Master's Degree (Normally with Distinction)
- Proof of English Language Qualifications

For # 1-6 Research Topics the standard English Language requirement is IELTS at 7.0 with a minimum of 6.0 in each component or equivalent. For the # 7-11 Research Topics please see the English language requirements for prospective postgraduate students at The University of Sheffield:

<http://www.sheffield.ac.uk/postgraduate/research/englang>

<http://www.sheffield.ac.uk/postgraduate/info/englang>

3. Tuition Fees

Tuition fees differ depending on the Department of registration. Indicatively, annual fees range from 4,260 GBP to 5,260 GBP for EU citizens and 16,800 GBP to 22,450 GBP for non-EU citizens (FT students; half of these amounts apply for PT students). Interested students may enquire at zxygalata@seerc.org

4. Fee Waivers

Once again this year, the University of Sheffield and its' International Faculty - CITY College will be offering a small number of fee waiver positions for students to read for a PhD **through SEERC**. The fee waivers are offered to applicants with outstanding academic records and the process is highly competitive. **Please note that fee waivers are only given to candidates applying for Full time studies.**

More information on the terms of reference of the Fee waivers can be found at the following link:

<http://www.seerc.org/new/index.php/doctoral-programme/studentships.html>

5. Submission process

We accept proposals from qualified students for Full-time or for Part-time study, **however fee waivers are offered for FULL TIME studies only. The topics on which we accept applications are the following:**

Research Track 1: Enterprise Innovation and Development	
Topic 1:	Building the next generation leaders in social entrepreneurship: skills, governance & innovation
Topic 2:	Exploring the current role of sustainability in the Balkans: An investigation into organisational practices and consumer behaviour
Topic 3:	Designing an innovating organizational learning platform. Examining the relationships between organisational social networking systems, knowledge management and organizational learning
Topic 4:	Investigating the relationships between information technology (IT) business alignment, its potential failure and its influence on firm performance
Topic 5:	Bank Capital and Liquidity Creation in the EU Banking System
Research Track 2: Information and Communication Technologies	
Topic 6:	Efficient Control of Drones Communications in IoT
Research Track 3: From Synapses to Society: Psychology in a Multi-cultural World Research Track	
Topic 7:	The mental health of refugees: Discrimination, integration and identity
Topic 8:	Effectiveness of a combined treatment approach incorporating Working Memory (WMT) and Goal Management Training (GMT) in the performance of patients at the early stages of Alzheimer's disease on complex real-life tasks
Topic 9:	Enhanced self-disgust in Parkinson's disease – unravelling its cause
Topic 10:	The bilingual effect in executive functions and the role of dopamine activity
Research Track 4: Language and Society: Linguistics, Education, Literature and Translation	
Topic: 11	A Corpus-based Analysis of English Use by Foreign Language Learners in South-East Europe

In order to apply, PhD candidates need to download the [Application Form](#) along with the [Guidance Notes](#) from SEERC's web site¹, complete the application, and then send, by post the application folder to SEERC.

Please note that incomplete applications will be disqualified from the process. Candidates have to ensure that all supporting documentation is included in the application. The application form and supporting documents should be accompanied by a **Research Proposal** and an updated **CV**. **The CV and the proposal of the PhD candidate should be sent electronically also, by e-mail at phd_admissions@seerc.org**

The **Research Proposal** should be typed, the length should be about 1,500 – 2,000 words (6 to 8 pages) and should include the following:

- a) *Title of the proposed thesis*
- b) *Reference to one of the Specific Research Topics (section 6)*
- c) *Proposed mode of work (full time or part time)*
- d) *Proposed source of Funding: Fee Waiver (Full time Only), Personal funding, funded by any other institution/organization e.t.c.*
- e) *Background to research topic*

This section needs to introduce the topic before discussing it in relation to wider academic debates. The section might seek to situate the topic and highlight why the issue being addressed is important - this should be identified and justified as an important/interesting academic issue not simply in terms of current media/political/popular interest.

- f) *Specific problem(s) to be examined*

In his section the discussion of the topic needs to be more specific. The focus should include reference to the framework or conceptual approach that the research might seek to draw on. Also the discussion is likely to highlight and make reference to parallel, comparable and complimentary research. The aim of this section is essentially to set up the area of research specifically. The challenge is to ensure that the proposed research has a substantive empirical and conceptual focus, both of which are suitably grounded in contemporary academic debate with appropriate

¹ <http://www.seerc.org/new/index.php/doctoral-programme/how-to-apply.html>

citations to relevant literature. By the end of the section a gap in existing knowledge needs to be highlighted and the research questions(s) that the thesis will address be stated.

g) Methods of research proposal, plan and timetable of work

The research methods section needs to highlight what methods will be used and how, with an appropriate level of detail. In the case on quantitative research the data set to be accessed and used should be identified and the nature if proposed statistical analysis detailed. In the case of more qualitative research, again the methods should be elaborated and proposed stakeholders/populations to be interviewed/surveyed should be detailed. Due consideration should be given to accessing relevant data/interviewees. Proposals should also highlight ethical issues and potential limitations.

h) Resources available and required (if any)

i) Any other information in support of your proposal

j) The proposal should include correct literature citations and a brief bibliography

All applications should be submitted at SEERC by June 22, 2018 (postmarked). (PLEASE NOTE THAT ON THE ENVELOPE/FOLDER SHOULD BE CLEARLY WRITTEN “SEERC-SHEFFIELD DOCTORAL PROGRAMME APPLICATION FOLDER”)

Moreover, **an electronic version of the Research proposal and the CV should be sent by June 22, 2018 by email to SEERC at phd_admissions@seerc.org.**

Incomplete applications missing one or more documents or failure to submit the hard copies of the application by post (i.e. submission only of the proposal in electronic form) to SEERC will result to the application's disqualifying.

The possible outcomes of your application are:

- Acceptance to read for a PhD
- Acceptance to read for a PhD with a fee waiver (FULL TIME candidates only)
- Rejection

All candidates will be informed on the outcome of the evaluation procedure, which may involve an interview at SEERC premises with the proposed supervisors.

A step-by-step guide to submitting your application	
Step 1:	Read in detail the requirements from this Call for Proposals
Step 2:	Download the application form
Step 3:	Read the Guidance Notes for completing it
Step 4:	Prepare Research Proposal and an Updated CV according to Guidelines
Step 5:	Prepare supporting documents for inclusion in the application pack
Step 6:	Send by post or in person 1 envelope with the application and all the supporting documents to SEERC. Do this by June 22, 2018 (post stamp as proof of validity of the application).
Step 7:	Send by June 22, 2018 the Research proposal and the updated CV by e-mail to phd_admissions@seerc.org

6. Research Topics

Research Track 1: Enterprise Innovation and Development

[Topic 1: Building the next generation leaders in social entrepreneurship: skills, governance & innovation](#)

Social entrepreneurship, as a (still) young discipline in the academic sector, poses substantial challenges for researchers towards developing more successful models of impactful and resilient social entrepreneurs that can success in nowadays complex and globalized context. Whether social entrepreneurship has been traditionally researched from institutional, stakeholder and resource-based view philosophical paradigms, recent challenges pose new areas of inquiry with a central focus on the actual individual (social entrepreneur) and his/her behaviour, skills and creativity in the process of successful social venture launch and leadership.

To this end, this proposed PhD research topic could focus on analysing and extending **behavioural/cognitive models for lean leadership/management** models in the

context of social entrepreneurship that would enable a more creative & innovative approach to social entrepreneurship leadership. Firstly, this would require an in-depth analysis and research of skills, methodologies and approaches from the organizational behaviour and cognition sciences. This action is aimed at identifying pathways for widening creativity, agility and diminishing cognitive biases which would improve the performance of social entrepreneurs leaders. Secondly, this challenge implies the development of an improved lean-based **productivity framework** for social entrepreneurship leadership which will build upon the innovative behavioural/cognitive leadership models. Lastly, this innovative leadership model should include recommendations in terms of social entrepreneurship **stakeholder management** (customer, investor, government, etc) as well as in terms of the impact of innovative technologies and how they affect leadership models (i.e. artificial intelligence, etc) when it comes to boosting the social impact of a social venture.

Proposed supervisor from the International Faculty: Prof Ketikidis

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[Topic 2: Exploring the current role of sustainability in the Balkans: An investigation into organisational practices and consumer behavior](#)

The Post Development Agenda of the United Nations raised several important issues to be addressed in the near future, for the purpose of achieving overall greater global welfare. Consequently, the task of developing sustainable solutions in business has been highlighted, and given prominence due to recent incidents caused by unethical and unsustainable practices worldwide. Despite the fact that countries and firms are attempting to produce sustainable business models through corporate social responsibility schemes, it is undeniable that in the area of South East Europe sustainability is being addressed at a slow pace. Even in countries which have placed more emphasis on sustainability issues, there is a popular preconception that firms are implementing such schemes for marketing and branding purposes, rather than fully integrating it to address specific issues. The wider context of global consumerism which continually forces replacement of goods and an overall increase in consumption creates a situation which contradicts the global United Nations plan. Therefore, it is pertinent to ask what the exact role of sustainability is in the 21st

century, particularly in the Balkan area where its significance has possibly not been fully comprehended to date.

Lastly it would be invaluable to uncover how small and medium sized enterprises in the Balkan area, with turbulent and uncertain market and economic conditions, are dealing with the phenomenon of sustainability.

Proposed supervisor from the International Faculty: Dr Alexandros Kapoulas

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Topic 3: Designing an innovating organizational learning platform. Examining the relationships between organisational social networking systems, knowledge management and organizational learning

Nowadays, enterprise social media practitioners and researchers are keen to know how the enterprise usage of social media can be converted into the improved organizational performance. Meanwhile, social networking is a vessel the supports organizational knowledge which in turn is associated with organizational learning.

This research will be focused on examining, in-depth, the relationships between organisational social networking systems, knowledge management and organizational learning. Capturing the knowledge of social networking data e.g. posts etc. and managing this knowledge appropriately enhances and improves the level of firm's organizational learning. Thus, the automation of such a frame/process, by the utilization of a prototyped platform will assist South East European firms to reassess the value of their existing social networking systems or even implement a social networking system, in order to improve their organizational learning level.

Proposed supervisor from the International Faculty: Dr Anastasios Diamantidis

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Topic 4: Investigating the relationships between information technology (IT) business alignment, its potential failure and its influence on firm performance

"Technology is a useful servant but a dangerous master", Christian Lous Lange, Norwegian Politician, 1869-1938.

Studies for over 30 years have consistently indicated that enterprise-level Business-Information Technology (IT) alignment is a pervasive problem. While significant progress has been made to understand alignment, research on IT alignment and its potential failure is still plagued by several problems.

Based on the above, this proposed PhD research topic may focus on analysing and extending the already existing research models dealing with IT performance, IT alignment with the existing business processes/procedures, IT failure factors and their impact on firm performance. This in-depth analysis, of the aforementioned factors, will lead to a broader conceptual model presenting and researching the reasons why after around fifty years of digitation a noticeable number of organizational IT implementation projects, still, fail to improve firms' organizational performance. The results of such a research, will help South East European companies to have identify and recognize IT implementation factors, that probably, have a crucial in improving the IT implementation outcomes and, in-turn, their performance and competitiveness.

Proposed supervisor from the International Faculty: Dr Anastasios Diamantidis

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Topic 5: Bank Capital and Liquidity Creation in the EU Banking System

One of the least researched issues related to the essence of Banking is liquidity creation and its determinants. In the aftermath of the global financial crisis of 2007–2009, there has been an open discussion on the need for banks to reduce the risk of their operations with higher capital ratios, which is largely reflected in the corresponding regulatory frameworks such as Basel III. These requirements have started already affecting the capital structure of banks and therefore their effects on real economy are gradually appearing. However, few are mentioned regarding the most basic banking function, which is the liquidity creation. Despite this vital role of liquidity creation by banks, this is a rather virgin research field with voids in measuring it as well as understanding by which parameters it is affected.

Empirically there is very limited evidence regarding the effects of bank capital on liquidity creation. In addition the empirical evidence is even more limited when it comes to EU banks. Therefore, the proposed research will shed light primarily on the complexities of the relation between bank capital and liquidity creation. Additionally

the research will be oriented to display the significant and possibly causal associations between liquidity creation and a series of other macro/micro-economics and financial variables. In terms of geographical focus, the research will be primarily focused on the EU banking system. In a later stage the research could proceed to the comparative analysis of the empirical findings between different geographical regions of the World.

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Research Track 2: Information & Communication Technologies

Topic 6: Efficient Control of Drones Communications in IoT

The Internet of things (IoT) constitutes a rapidly emerging cutting-edge environment in which the focal concept lies in the orchestration of a large variety of smart objects in such a way that they can be utilised and operated globally either directly by the users or by special software that captures their behaviour and objectives. IoT will enable objects to become active participants of everyday activities. It is estimated that around 25 billion uniquely identifiable objects are expected to be part of this global community by 2020.

Mobile semi-autonomous devices are expected to enter the IoT architecture as another type of smart devices. Drones or Unmanned Aerial Vehicles (UAVs) as sensor devices open up a significant number of IoT applications in various fields, such as surveillance, agriculture, infrastructure maintenance, payload delivery et al. In that sense, there is a growing demand for efficient techniques that enable the insertion of drones in the IoT architecture as a special class of “mobile Things”. The key issue in such an endeavour is to ensure efficient interconnectivity, which enhances operation autonomy. In more details, drones are anticipated to form aerial vehicle-to-vehicle networks within IoT, exhibiting advanced self-management capabilities. Towards this goal, it is of high importance to conceptualise and implement specialised routing mechanisms and related networking schemes, which fulfil the requirements for efficient drones IoT communications.

The main aim of this project is the design, development, and evaluation of networking techniques for efficient drones’ communications in the IoT architecture. In more

detail, the respective protocols are expected to focus on routing issues and provide enhanced self-organizing features, power conservation capabilities, as well as Quality of Service (QoS) support in drone networks. Sensitive security and privacy issues should be also taken into account. Related cutting-edge techniques that enhance communications in the IoT architecture need to be thoroughly studied and the corresponding research gaps should be identified. The designed techniques have to be evaluated in comparison with known approaches through simulation and/or mathematical analysis.

Skills/experience on the following fields would be appreciated:

- Network modelling/simulation
- Communications protocols
- Software development (programming/scripting)
- Mathematical analytical skills
- Wireless sensors
- Embedded systems (such as Arduino and/or Raspberry Pi)
- Unix-like systems

Proposed supervisor from the International Faculty: Dr Thomas Lagkas

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Research Track 3: From Synapses to Society: Psychology in a Multi-cultural World Research Track

[Topic 7: The mental health of refugees: Discrimination, integration and identity](#)

People have a strong need to join and belong to social groups. One important function of joining a social group is that it allows the incorporation of the group identity into the identity of one's self which promotes mental health (Jetten, C. Haslam, & Alexander 2012; McIntyre, Wickham, Barr & Bentall, 2017).

In 2015 over a million refugees entered or transited through Greece (Ziomas, Capella & Konstantinidou, 2017) leading to significant sociopolitical challenges. These challenges especially concerning the social integration of refugees have brought forth significant and complex social, political and psychological issues, such as issues of

prejudice, identity and citizenship. The need for research in psychosocial issues that relate to immigration and refugee crises has been highlighted in both international (Castañeda, Chatzimpyros & Nemmeh, 2014; Chow, Jaffee & Choi, 1990, Sonne, Carlsson, Bech, Vindbjerg, Mortensen & Elklit, 2016) and national level (Apostolidou & Hartofylaka, 2017; Dikaiou & Haritos- Fatouras, 2002; Maridou, 2017).

Given that cultural identities play a significant role in mitigating precursors of mental health, the social disconnection along with the ethnic discrimination experienced by refugee groups, make them vulnerable to issues of mental health. These vulnerabilities affect not only individual refugees, but their families and possibly generations to come as well (McIntyre, Elahi & Bentall, 2016).

The proposed research will examine these issues of identity, discrimination and their impact on the mental health of refugees with regard to their social integration. Drawing from the notion that research is not simply a reflection of reality but produces systems of knowledge (Dikaiou, 20013), the issue of who the research participants are, is of significant importance. Within this epistemological view, the emphasis of the experience of refugees themselves aims at producing knowledge that informs integration processes and their connection to identity and mental health.

Proposed supervisor from the International Faculty: Dr. Vasileios Chatzimpyros

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[Topic 8: Effectiveness of a combined treatment approach incorporating Working Memory \(WMT\) and Goal Management Training \(GMT\) in the performance of patients at the early stages of Alzheimer's disease on complex real-life tasks](#)

Working memory (WM) is a cognitive mechanism of temporary storage and maintenance of information, crucial to complex daily activities (Dujardin et al., 2004, Dahlin et al., 2008; Netto et al., 2010). WM capacities are necessary when we read the newspaper or a text with historical events, when we watch a movie or a series (plot of scenes and episodes) on TV, when we keep in mind our daily schedule or a question to ask after a break in a discussion etc. WM impairments result in loss of sustained attention and memory problems, such as forgetting what to do in a few seconds of walking from one room to the other, or being easily distracted while trying to focus

on a task and not being able to accomplish an activity according to a plan (Smith, 2013).

As proposed in Baddeley's revised multi-component model of working memory (Baddeley, 2000; Baddely & Hitch, 1974), the 'central executive' is a higher-ordered attentional component of the WM system that controls the flow of information in the other three subsystems (the 'visuo-spatial scratchpad', the 'phonological loop', and the 'episodic buffer'), coordinates goal-directed behaviour in a complex task and provides a link between the three slave systems and the long-term memory (Baddeley, 1996; 2000; Netto et al., 2010; Smith, 2013). The episodic buffer is the most recent addition to this model and it has been assumed to have a limited capacity and to directly obtain information from the other WM subcomponents and long-term memory, transforming it into coherent episodes. The episodic buffer can be defined as an interface between a number of other different cognitive sources, such as visual, verbal, and perceptual codes, and long-term, semantic, and episodic memories (Netto et al., 2010). Thus, poor working memory capacities can further affect negatively the process of new incoming information (e.g. instructions to-be-learned in mathematics or reading), its learning and the transfer of it in the long-term storage, as well as the retrieval of this already stored information so as to be used in 'real-time' situations (Dahlin et al., 2008; Smith, 2013; Truedsson & Strohmayer, 2013). WM impairments are one of the most noticeable features of patients with early-onset Alzheimer's disease (Sebastian et al., 2006; MacPherson et al., 2007; Lim et al., 2008; Huntley et al., 2010). Deficits in the WM system and mainly in its central executive component are typically related to central 'frontal lobe' executive dysfunction (Baddeley et al., 2003; Smith, 2013). However, a recent functional neuroimaging study has attributed reduced performance of patients with early-onset Alzheimer's dementia on a set of executive, attention and working memory tasks to concurrent temporoparietal abnormalities (Stopford et al., 2012). Common working memory symptoms observed in daily living of patients with early-onset Alzheimer's dementia include failure to carry out two tasks concurrently, omissions or loss of flow in an continuous activity, difficulties in retaining 'online' previously presented and currently uploaded information when following a plan, repetitions (perseverations) of actions, questions or information already reported when learning a new material or performing a complex task (Baddeley et al., 1986;1991a, 1991b; Morris and Baddeley, 1988; Logie et al., 2004; Baddeley, 2003; Belleville et al., 2007; Dahlin et al., 2008).

However, despite the importance of WM in daily memory functioning of older adults with Alzheimer's disease, only a small number of RCTs and single-case studies has investigated the effects of WMT to the improvement of memory functioning in adults. These studies applied WM interventions varying in the type of rehabilitation, the training tasks and the strategies given during the training sessions as well as in the duration of the training procedure (Dahlin et al., 2008; Netto et al., 2010). They were also mainly focused on healthy older adults (Craik et al., 2007; Buschkuhl et al., 2008) and younger adults with acquired brain injuries (Serino et al., 2007; Westerberg et al., 2007) rather than on patients with neurodegenerative diseases. Most of these studies used 'meaningless' experimental WM exercises as their training tasks to enhance WM capacities such as: indicating numbers in reverse order, identifying letter positions in a sequence, identifying a letter sequence in pseudo words, finding mismatched letters, etc. Only one study (Duval et al., 2008) implemented an ecological rehabilitation program using 'analyses of scenarios' and 'simulations of real-life situations' as training tasks in order to explore the enhancement of WM capacities of a healthy bilingual young adult. Considering the results, all these studies demonstrated gains from WMT. Furthermore, four investigations presented a generalization effect to everyday life and one study demonstrated a transfer effect to cognitive domains related to WM. After 3 months, follow-up assessment still showed maintenance of WM improvement as a result of two interventions (Netto et al., 2010). However, findings regarding training and transfer effects are mixed (Zinke et al., 2013).

On the other hand, the effectiveness of WMT on the improvement of everyday performance of patients with Alzheimer's disease by using more ecological, 'real-world' multi-step training tasks has not been examined so far. Everyday WM problems of patients with Alzheimer's disease and their negative impact on learning and retrieval capacities are frequently observed in more complex, multi-step activities of daily living (ADL). Multi-step ADL require energetic accessibility to an already stored script of actions (sub-goals) leading to the final goal (main task) and keeping in mind the correct sequence of them during actual performing, for instance when following step-by-step instructions to use an electronic device, to find a route or to prepare a meal already learned and executed the previous day or the previous week. Most of these multi-step ADL rely on structured learning and procedural memory skills as well as on goal-attainment and self-control processes (Sohlberg and Turkstra, 2011). Consequently, WM deficits in multi-step ADL reflect special

dysfunctions in cognitive executive control processes such as mental tracking, monitoring and regulating a serial order of actions (steps) towards the correct completion of the multi-step task (Levine et al., 2000; Sohlberg and Turkstra, 2011). Therefore, WM training (WMT) focused together with training in executive functions, e.g. GMT, is expected to improve the central executive component of the WM system as well as learning, long-term maintenance of multi-step ADL and 'real-time' use of this stored information whenever it is needed to be retrieved.

Therefore, the main goal of this PhD. project is to investigate the effectiveness of a combined treatment approach incorporating WMT and GMT in the improvement of everyday performance of patients at the early stages of Alzheimer's disease on 'real-life' multistep ADL. The transfer effects of this rehabilitation program on everyday memory capacities of patients with dementia will be examined as well. No other study has attempted so far to apply a combined treatment procedure of WMT and GMT with the aim to facilitate everyday memory performance of patients with dementia. This work could provide useful information for clinicians about the specific real-life cognitive difficulties of patients at the early stages of Alzheimer's disease and the suitability of combined treatment approaches for the management of these problems in their everyday life.

Proposed supervisor from the International Faculty: Dr Anna Emmanouel
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Topic 9: Enhanced self-disgust in Parkinson's disease – unravelling its cause

Disgust is increasingly recognised as playing a significant role in a range of mental health problems, such as specific phobias, contamination-based obsessive-compulsive disorder, eating disorders and post-traumatic stress disorder. Disgust itself is a heterogeneous construct, and recent research has discovered an important mediating role for disgust directed at the self – 'self disgust' – in psychopathology (Overton et al., 2008; Simpson et al., 2010). However little is known about the cognitive mechanisms and neuroscience behind the development, experience and recognition of self-disgust, and self-conscious emotions-SCEs- overall. In a previous project we investigated SCEs (self-disgust, shame and guilt) in patients with Parkinson disease (PD). Motor symptoms are at the core of this neurodegenerative

disease, but research has shown that PD patients have non-motor symptoms including changes in the recognition and expression of basic emotions. In the majority of cases, patients have been reported to show emotional impairments, especially in relation to the 'basic' emotions. However, surprisingly, in our recent work with our PhD student Marianna Tsatali we found that PD patients experienced higher self-reported SCEs relative to controls, and that these emotions were more easily induced experimentally. Self-disgust was significantly higher in PD patients relative to controls even when we eliminated the effect of depression and anxiety. The current projects intends to follow up this exciting and novel result by investigating potential factors (cognitive, neurophysiological, or behavioural) that may account for the higher level of self-disgust in Parkinson patients.

Broadly speaking, the project will use self-report measures, emotional recognition measures and psychophysiological measures (e.g. skin conductance, heart rate, EEG) to unravel the processes underlying the increased levels of SCEs in Parkinson's patients. The specifics of the project will be determined in discussion with the successful candidate, however one possibility that we're keen to explore is that emotion regulation processes may have been changed by the disease.

Understanding self-disgust in PD and its relation to the underlying neuropathology and non-motor symptomatology may have important implications for alternative therapeutic approaches, and for a better understanding of self-conscious emotions which is an understudied topic. Depression is a major mental health issue in PD and the clear link between self-disgust and depression (Overton et al., 2008; Simpson et al., 2010) suggests that a greater understanding of self-disgust in PD may also have a positive impact on the mental health status of PD patients.

Proposed supervisor from the International Faculty: Prof Ana Vivas

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[Topic 10: The bilingual effect in executive functions and the role of dopamine activity](#)

Due to globalization policies and the advancement of information technologies in the past decades, bilingual and multilingual people outnumber monolinguals. In addition, traditionally, studies on the effects of bilingualism influence public educational policies. Hence the growing media and research interest in the possible effects of

bilingualism in cognition. A large amount of evidence support a bilingual advantage over monolinguals in executive functions (EF; e.g. Ariza, & Bajo, 2015; Bialystok & De Pape, 2009; Bialystok, et al., 2004; 2008; Costa et al., 2008; Gómez-Ariza, & Bajo, 2013; Kemp, 2007; Prior & Gollan, 2011; Prior & MacWhinney 2010; Soveri, Rodriguez-Fornells, & Laine, 2011; Zied et al., 2004). The cognitive training a bilingual undergoes in his/her everyday life by switching back and forth between his/her different linguistic sets is held responsible for this cognitive advantage, as the cognitive functions used for this switching are the same that are used for other, non-linguistic tasks; hence the generalizability of this bilingual “brain training” to non-linguistic domains (Bialystok, 2017). However, more recent studies fail to replicate such findings, across ages (e.g. see Duñabeitia et al., 2014 and Ladas, Carroll & Vivas, 2015 for a null bilingual effect in children; see Paap and Greenberg, 2013; Vivas, Ladas, Salvati, and Chrysochoou, 2017; von Bastian, Souza, & Gade, 2016 for a null bilingual effect in young adults; see Antón, Fernández García, Carreiras, & Duñabeitia, 2016; Kousaie & Phillips, 2012; Clare et al., 2014 for a null bilingual effect in older adults). Several factors may contribute to this difficulty in replicating the bilingual effect, one of which is the socioeconomic status of the individuals tested (SES, see Ladas et al., 2015; Morton & Harper, 2007; Paap et al., 2015), as traditionally SES has a strong influence on cognitive development (e.g. Mezzacappa, 2004). Other factors that seem to seriously confound bilingual studies is the large variability in the bilingual participants' fluency, similarity of languages used, amount of daily use and age of acquisition of the 2nd language (e.g. Gathercole et al., 2014; Green & Abutalebi, 2013). The tasks used may also be responsible for this profound difficulty in replicating the bilingual advantages. These considerations led us to believe that maybe many studies reporting a bilingual cognitive benefit lack a sound methodological design, taking into account all the aforementioned factors. In addition, we believe that if there was a bilingual effect, it may be so small that it can only be detected under very specific circumstances (e.g. see Ladas, Carroll & Vivas, 2013, exp. 4) or maybe the bilingual experience is more clearly reflected on a neurochemical level instead of a behavioral one. Given that dopamine is the main neurotransmitter underlying EFs, and that EFs seem to benefit from bilingualism, we expect that dopamine activity might be influenced by bilingualism. However, no studies have investigated this possibility yet. More specifically, the striatum plays a key role in rapid switching from one language to the other and in set-shifting (Jean-Sebastien Provost, 2015) and dopamine is the main neurotransmitter involved in the striatum. As an indirect measure of striatum

dopamine activity, we use the spontaneous Eye Blink Rates (sEBR), which is a non-invasive, cost-effective, reliable and easily quantifiable measure of central dopamine activity, the validity of which has been tested in several clinical and non-clinical populations (Colzato, 2016). The best method to measure sEBRs is with an Electro-oculogram (EOG), which we have in our EEG lab in the IF. The research questions that we wish to address are: (a) Is there a bilingual benefit in EFs after controlling for the important confounding variables that have been reported in the literature? (b) How does language similarity, and to this end bidialectism, influence the so-called bilingual effect? (c) What are the most suitable tasks to be used in studies of the bilingual benefit and why? (d) Is striatum dopamine different in bilinguals compared to monolinguals and is this reflected in their behavioral performance?

Proposed supervisor from the International Faculty: Dr Aristeia Ladas

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Research Track 4: Language and Society: Linguistics, Education, Literature and Translation

[Topic 11: A Corpus-based Analysis of English Use by Foreign Language Learners in South-East Europe](#)

The ongoing development and intensive use of corpora in the field of Applied Linguistics has undoubtedly provided researchers and EFL teachers with numerous opportunities to explore certain neglected or unclear areas of second language acquisition. The aim of the present doctoral project is to study L2 learners' output through the creation of a Learner Corpus consisting of written-production data by university students coming from South-East European (SEE) countries. Through the adoption of a Contrastive and Error Analysis approach, this study can greatly contribute to second/foreign language acquisition research, as its originality lies in the university students' diverse L1 background. A quantitative and qualitative analysis of errors will be also attempted focusing on the difficulties advanced learners of English face in relation to the use of certain lexical and grammatical features/structures in their writing. Examining learners' written production in their first years of studies in an English-speaking academic environment will help us uncover specific patterns as well as identify affinities and differences among L2

learners of different L1 backgrounds. Building a large corpus database of student essays will assist us in exploring consistencies and variations found among foreign language learners of English (possibly indicating a particular impact of their L1, namely a SEE language, on the L2). Such observations will not only offer a better insight into English language learners' difficulties, but will be used to predict language problems that SEE incoming students may encounter, and, thus, remedy them in the early stages of their learning procedure, potentially through a computerised application.

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