POSTGRADUATE RESEARCHERS SUMMER CONFERENCE

4th and 5th July 2023

Middlesex University London
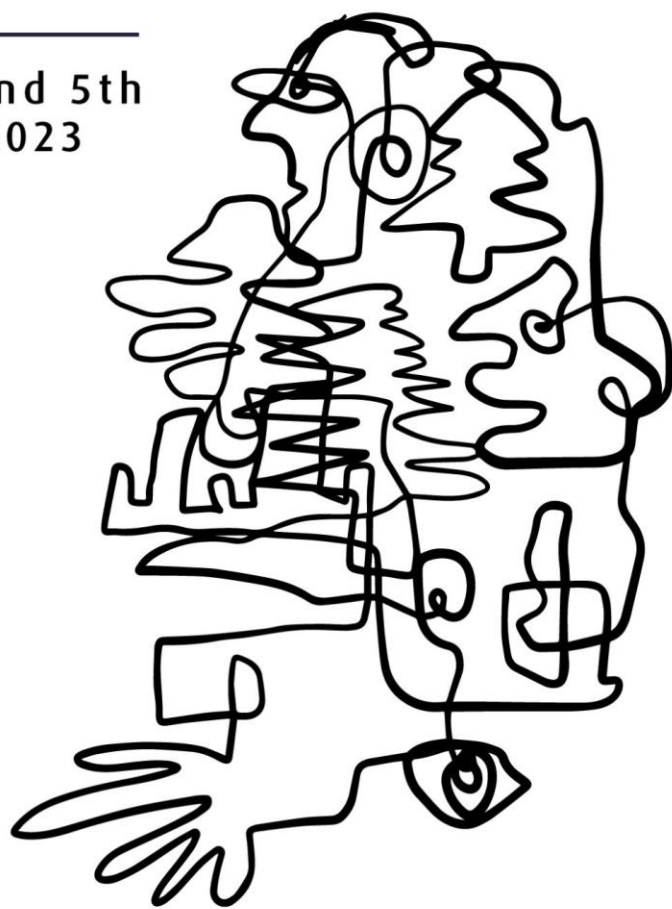
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Welcome Message from the Conference Chairs

Radically Creative: Research towards an Equal, Ethical, Inclusive and Sustainable Future

"*The challenge these days, is to be somewhere, to belong to some particular place, invest oneself in it, draw strength and courage from it, to dwell in a community*"

In response to these wise words from bell hooks (philosopher, teacher, activist) we are delighted to welcome you all to the PRSC2023. This event kicks off a week-long Research Festival that is intended to bring the MDX community together in celebration of the potential that research holds to make a difference. We are united by a commitment to generate knowledge that contributes towards fairer, healthier, more prosperous, and sustainable societies. **Radical creativity** plays a significant role in achieving this goal. To that end, the theme of this year's conference *'Radically Creative: Research towards an Equal, Ethical, Inclusive and Sustainable Future'* provides a rich 'somewhere' for us all to collectively dwell upon the potential for research to be bold, creative and impactful.

PGRSC2023 brings a diverse body of postgraduate researchers from all disciplines together to share how radical creativity can underpin critical enquiry. PRSC has long been a key event in the MDX calendar – offering a vital opportunity to come together in celebration of research undertaken across faculties and our collaborative partner institutions. It is a vital opportunity to share ideas, create fruitful collaborations and crucially 'dwell in a community'. The event includes an incredible line up of keynote addresses and performances from inspirational figures whose work squarely speaks to the theme of the conference. We hope that you will enjoy two-days bursting with engaging and lively debate. We feel certain that this in-person experience that will both challenge and inspire you.

Conference Chairs, Prof Jayne Osgood and Dr Tuan Le

Patrycja Brodka Pedro and Haider Alkhateeb

Bios and credits

Prof Joy Warmington

CEO of brap

Opening keynote address, Tuesday 4 July, 9:45am

Joy began her leadership career over 30 years ago designing ground-breaking learning programs for marginalized communities. Then came senior leadership roles in education, local authority and civil society, including 22 years as brap's CEO, one of the UK's most progressive equality and human rights charities. brap seeks to rethink our approach to equality in order to make "real" change. brap's efforts are designed to generate evidence, be more ambitious about their work and encourage innovation. brap's impressive work portfolio covers research, evaluation, organizational and individual development, and community support. Joy's insights into making equity a reality, are sought after by organizations seeking real solutions to exclusion and inequity. 2019 saw Joy awarded an MBE and named one of 50 "Women to Watch" by Cranfield University. As a lifelong learner and recent graduate in process work –a psycho-social method to democratize spaces and address conflict– Joy brings her unerring curiosity and appetite for change and creativity to her work. Areas of specialty: inclusion, anti-racism, organizational change, leadership development, conflict management.

Prof Heidi Safia Mirza

Emeritus Professor UCL Institute of Education
Visiting Professor Race, Faith and Culture Goldsmiths College

Keynote address, Wednesday 5 July, 9:30am

Heidi Safia Mirza is known for her pioneering intersectional research on race, gender and identity in education and has an international reputation for championing equality and human rights for Black, Muslim, Asian women, and young people through educational reform. A daughter of the Windrush generation from Trinidad and schooled in Brixton, Heidi is one of the first and rare 35 'Phenomenal Women' Black Women professors in Britain. She is author of several best-selling books including Black British Feminism and Young Female and Black, which was voted in the top 40 most influential educational studies in Britain. Professor Mirza is a leading voice in the global debate on decolonisation and co-edited the flagship book, 'Dismantling Race in Higher Education: Racism, whiteness and decolonising the academy'. She currently leads the IFS Deaton Race and Ethnic Inequalities Review which includes the impact of COVID-19 on Black and minority ethnic communities.

Prof Sean Wellington

Provost and Deputy Vice-Chancellor
Interim Vice-Chancellor, Middlesex University

Sean has taught a range of subjects in engineering and computing over more than thirty years. He is a thought leader on engineering education and led a review of the Engineering Council standard used for the accreditation of engineering degree programmes. Prior to joining Middlesex, Sean worked at Oxford Brookes University where he held senior leadership roles including Pro Vice-Chancellor and Dean of the Faculty of Technology, Design and Environment and Pro Vice-Chancellor (Student Experience). He has led on the development of innovative new partnership activity and worked closely with the further education sector. Sean has served as an External Governor of two general FE colleges and is currently a Trustee and Chair of Colindale Communities Trust (CCT) and a Trustee of WorldSkills UK. Since beginning his career in the engineering industry, initially as an Apprentice, Sean has held teaching, research and leadership positions in three universities and roles with sector bodies including Quality Assurance Agency for Higher Education (QAA) and Office for Students (OfS). Sean was appointed to the Teaching Excellence Framework (TEF) Panel, with responsibility for carrying out the 2023 TEF assessments. In his role as Provost and Deputy Vice-Chancellor, Sean exercises strategic leadership and has responsibility for all academic areas. This includes line management of the new roles of Pro Vice-Chancellor Education and Student Experience and Pro Vice-Chancellor Research and Knowledge Exchange. Sean also line manages the Academic Deans responsible for the four London-based Faculties and is responsible for the development and implementation of academic strategies and strategic resource allocation.

Prof Jayne Osgood

Prof of Childhood Studies at the Centre for Education Research & Scholarship at Middlesex University
Chair of Postgraduate Researchers' Summer Conference 2023

Jayne Osgood is Professor of Childhood Studies at Middlesex University and Professor II at Hogskolen a Innlandet University, Norway. Her work addresses issues of social justice through critical engagement with policy, curricular frameworks, and pedagogical approaches in Early Childhood Education & Care. She is committed to extending understandings of childhood through creative, affective methodologies. She has published extensively within the post-modernist paradigm and she is currently editor for the Q1 journal: Gender & Education and the radically creative, open access journal: Reconceptualising Education Research Methodology. She is also Book Series Editor for the series Feminist Thought in Childhood Research; Keythinkers in Education; Postdevelopmental Approaches to Childhood. Jayne has delivered numerous international keynotes and has chaired and hosted various seminars and conferences. She is active in the postgraduate researcher community at Middlesex and facilitates workshops for students and supervisors and now the PRSC2023.

She was winner of the MDXSU Post Graduate Supervisor of the year, having successfully supervised seventeen doctoral researchers to completion and examined twenty-eight doctoral theses in the UK, Norway, Canada, USA, Australia, and Hong Kong. She is currently External Examiner for the taught PhD programme at Lancaster University. Jayne is thoroughly committed to ensuring that PGRs are well supported and can thrive by being active within research communities.

Dr Tuan Anh Le

Senior Lecturer in Design Engineering at Middlesex University
Chair of Postgraduate Researchers' Summer Conference 2023

Dr Tuan Anh Le received his PhD degree in telecommunications research from King's College London, The University of London, London, UK, in 2012. From 2009 to 2012, he was a Researcher with the Green Radio Project funded by the Core 5 Joint Research Program of the UK's Engineering and Physical Sciences Research Council (EPSRC) and the Virtual Center of Excellence in Mobile and Personal Communications (Mobile VCE). From 2013 to 2014, he was a Postdoctoral Research Fellow with the School of Electronic and Electrical Engineering, University of Leeds, Leeds, UK. In 2014, he joined the Faculty of Science and Technology, Middlesex University, London, UK, where he is currently a Senior Lecturer. His current research interests include applied convex optimization and machine learning for wireless communications. He was a recipient of the prestigious Ph.D. Scholarship jointly from the Mobile VCE and the UK Government's EPSRC. He is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE). He was a Technical Program Chair for the 26th IEEE International Conference on Telecommunications (ICT 2019). He was an Exemplary Reviewer of IEEE Communications Letters in 2019.

Patrycja Brodka Pedro

MSc, BSc (Hons), PhD Candidate in Biomedicine
Chair of Postgraduate Researchers' Summer Conference 2023

Patrycja Brodka Pedro (MSc, BSc (Hons)) is a Bioscience Technician in Natural Sciences Department at Middlesex University and a PhD student in Biomedicine at Middlesex University. Her research focuses on novel treatments for osteoarthritis and cells' response to these treatments. Despite the laboratory-based work, she also works with patients suffering from that incurable condition.

She completed her MSc in Sport and Exercise Nutrition at London Sport Institute, Middlesex University while doing the work placement and working as a research assistant at the Universidad de Navarra, Pamplona, Spain. The research she worked on focused on how different types of training affect body mass and body composition.

Currently, she works as a Student Voice Leader for PGRs students at Middlesex in Natural Science Department to improve students' research experience. Therefore, she joined the organising PGRS2023 committee. She

is actively involved in work towards the recognition of women in science and equality in workplaces by being involved in the events such as Global Women's Breakfast.

Haider Alkhateeb

PhD Candidate in Political Science
Chair of Postgraduate Researchers' Summer Conference 2023

Haider Alkhateeb is recognised for positively impacting diverse communities. As a PhD candidate in Political Science focusing on Shi'a power struggles in post-2003 Iraq, he brings a comprehensive understanding of complex global challenges. Haider successfully led a listening exercise for the Mayor's Office for Policing and Crime (MOPAC) in London, collecting experiences from diverse stakeholders. This initiative collected and analysed experiences and feedback from diverse stakeholders across the city, contributing significantly to a more informed and practical approach to policing and crime prevention. He led a week-long initiative in collaboration with the Cabinet Office, designed to celebrate and encourage young BAME participation, promoting diversity, inclusivity, and civic participation within the framework of the democracy programme. His academic contributions include presenting papers at conferences like the British Association for Islamic Studies (BRAIS). His paper, "The Abuse of the 'Islamic Caliphate' as a concept in causing humanitarian crises by violent extremism," resonates with his broader work and is a testament to his expertise in the field. As a research manager for the Centre of Islamic Studies, he successfully collaborated with the University of Chester's Islamic department and launched a quarterly online magazine. In 2008, Haider served as a Cultural Adviser for the Coalition Forces. Directly advising the deputy commander working on the National Reconciliation program, advising the deputy commander on cultural sensitivities and best practices, and developing programs promoting peaceful coexistence. These initiatives underscore Haider's holistic approach to community development and peacebuilding.

Zandile Ndlovu

Belonging, Inclusion and Diversity Lead at Investec Bank plc and Investec Wealth and Investment

Opening performance, Wednesday 5 July, 12:00pm, Grove Dance Studio

As a member of the Executive Leadership, Zandi works closely with the wider executive, business and functional leadership, the Belonging, Inclusion and Diversity (BID) Forums and networks and employees across the bank and wealth businesses. Zandi advises, collaborates and provides thought leadership to develop, drive and integrate Investec's BID strategy with impact ensuring integration into business management, employment and workplace practices.

Keynote Performance *A Black Mustard Seed in a Bowl of Rice*

As a keynote performance, Zandi's play is a result of a 3-year research project of corporate transformation initiated within a financial services organisation within the City of London. Recognising that 'diversity' training delivered at

a distance does not seem to bring about sustainable changes in attitudes, the aim of the research is to bring about a change in individual and organisation awareness that will inform changes in behaviour, the basis for culture shifts. The research practices included the gathering of stories, the researcher's immersion in them, the emergence of a play using the characters, words, emotions and anxieties expressed in the stories to reveal what is experienced relating to the explicit and the nuanced fragments of context which are challenging to articulate. The revelations make possible a more holistic picture of context through the verbatim accounts being fused with imagined realism and poetic interventions, giving articulation to that which is present and felt but 'hidden' in our everyday realities.

Pedro de Senna, Play Director

The play is directed by Pedro de Senna, Senior Lecturer in Contemporary Theatre Theory and Practice. Pedro was born in Rio de Janeiro, where he started performing in 1993. He has worked as an actor, director, dramaturg and translator. His current research focuses on the relationships between futures studies and performance studies; between theatre education and society; and between performance and right-wing politics. He has also published on theatre translation and adaptation, directing and dramaturgy, and disability aesthetics. Pedro joined Middlesex University in 2012, and is one of the RKE Leads in the Faculty of Arts and Creative Industries.

Summary

Set in the summer of 2020 within a financial services organisation in the City of London, this play follows the experience of two young graduates as they navigate their first year of corporate life, and of their leaders who are confronted – and often confused with – this different new generation.

Set within the context of a global pandemic, a national work-from-home directive and a world confronted the reality of racial inequality following the murder of George Floyd, the play deals with the complexities of inclusion, and tackles everyday realities that for the most part may go unseen.

The play is performed by 5 actors, including 3 students from the Performing Arts Department, Middlesex University: Bohlale Mokhele, Roxy Barron and recent graduate Anthony Gretton.

Closing Panel Discussion

Theme Directors, Prof Kurt Barling and Prof Johan Siebers

Chair for Postgraduate Research, Prof Vida Midgelow

Panel Chair, Discussant Prof Kate Maguire

Haider Alkhateeb

The Summer Conference will conclude with a plenary session hosted by Middlesex University Theme Directors with a discussion reflecting on the way conference participants' projects relate to and interact with our integrating themes: Equity and Improvements in Health and Wellbeing; Inclusive Socio-economic Development and Enriching Lives Through Culture; Sustainability of Communities and the Environment. Theme Directors Prof Kurt Barling and Prof Johan Siebers, Chair for Postgraduate Research Prof Vida Midgelow together with Prof Kate Maguire as discussant and with Haider Alkhateeb representing the postgraduate researchers' community as a current PGR

researcher will lead the discussion bringing the Conference to a close and introducing the Knowledge into Action Lab taking place 6-8 July 2023, ahead of a celebratory evening reception to mark the end of PRSC2023.

PRSC2023 Artwork

The unique poster design for PRSC2023 was created by Misa Murata, current PhD candidate in Graphic Design at Middlesex University. With great dedication to the character and essence of the MDX research events, Misa created the line drawing based on the theme, representing radical creativity. More information about Misa's work can be found at her website - https://misamurata.com/ and in her professional Instagram account - @misamurata_graphic.

PRSC2023 Organising Committee, Chairs and Admin Support

The Postgraduate Researchers' Summer Conference is an endeavour that comes to life every year for more than a decade (with one unfortunate but unavoidable exception in year 2020). This is thanks to the contribution, insights and diversity and wealth of knowledge, experience and expertise of its Organising Committee: Prof Juan Carlos Augusto, Prof Vida Midgelow, Dr Paula Nottingham, Prof Diane Purchase, Dr Liang Liu, Dr Sheila Cunningham, Dr Nico Pizzolato, Dr Anna Charalambidou, Prof Kate Maguire, Dr Leena Robertson, Dr Sandra Appiah, Dr Stefanie Sachsenmaier, Prof Xiaohong Gao, Dr Helen Gleeson, Dr Monday Ugiagbe, Nicola Skinner and Sofia Atsopardi.

Parallel presentation sessions will be chaired by Dr Giulia Pecorella, Dr Leena Robertson, Dr Nico Pizzolato, Dr Nicola Payne, Dr Helen Hingley- Jones, Prof Victoria de Rijke, Prof Diane Purchase, Dr Stefanie Sachsenmaier, Maxine Stephenson, Dr Paula Nottingham, Prof Juan Carlos Augusto, Dr Alice Donald, Prof Kate Maguire, Dr Bastien Chabe-Ferret, Dr Joris Gillett, Dr Liang Liu.

Conference Programme

4 July	5 July
09:00-09:30 Registration and welcome refreshments. Registration desk located in the Rickett Quadrangle (Quad), College Building, Hendon, at the main conference area **9:30-09:45** Opening & Welcome from Chairs **09:45-10:55** Welcome from Interim VC Prof Sean Wellington and keynote address from Prof Joy Warmington – Lecture theatre CG77 **11:00-12:30** Parallel sessions 1 (see programme for rooms) **12:30-13:25** Lunch and Poster Expo (Quad) **13:30-15:00** Parallel sessions 2 (see programme for rooms) **15:00-15:30** Tea/Coffee & Poster Expo (Quad) **15:30-17:00** Parallel sessions 3 (see programme for rooms)	**09:00-09:30** Tea and coffee **09:30-10:20** Keynote address by Prof Heidi Mirza – Lecture theatre CG77 **10:20-11:50** Parallel sessions 4 (see programme for rooms) **12:00-12:45** Keynote performance by Zandile Ndlovu and Pedro de Senna *A Black Mustard Seed in a Bowl of Rice* Grove Building, Grove Dance Theatre **12:45-13:25** Lunch and Poster Expo **13:30-15:00** Parallel sessions 5 (see programme for rooms) **15:10-16:10** Closing plenary session hosted by the Theme Directors – Lecture theatre CG77 **16:10-17:00** Closing Reception (Quad)

Presentations Programme

Day 1 – 4 July 2023

Parallel Session 1: 11:00am - 12:30pm

Session	Room	Chair	Presentations
1A	C107	Giulia Pecorella	*Ammar A Siddiqui* Generative Machine Learning for Visual Attribution in Medical Image Diagnostics *Mohammad E Hashimyar* Deep Learning based Intrusion Detection System for IoT Application Protocol *Yuehu Ji* An investigation on self-persistence in simulated cell assemblies

			Uchenna A Nnawuchi The Legal Right to Explanation in Machine Learning Context: An Old Wine in a New Wine Skin
1B	C109	Leena Robertson	*Andrew J Waller* Experiences of Mental Health Charity Volunteers. An Interpretative Phenomenological Analysis *Sarah J S Dalrymple* Training Partner engagement for an inclusive and sustainable workforce: the case for Modern Apprenticeships in Scotland *Tendai Gwenhure* Exploration of the experiences and perceptions of nurses at a UK Eye Hospital in considering post-graduate ophthalmic training
1C	C207	Nico Pizzolato	*Ndubuisi Idejiora-Kalu (independent PG researcher)* Unravelling the Microphysics of Disorders in Institutions in Post-colonial Countries using a CSH-based Transdisciplinary Systems Engineering Paradigm - A Case study of Nigeria *Russ Lewis* You say you want a revolution... *Sarah J Bell* An Ethnographic Fiction About Trust and Interpretability in Australian Proptech *Hannah Alexander-Wright* "As led". Exploring spirituality as a means to change our research for the good
1D	C104	Nicola Payne and Mabel Verstraate-Bortier	*Lisa Champion* Dwelling Phenomenologically: An Invitation to Creativity *Mahensingh Deonaran* How do cognitive modes of expression used by forensic witnesses affect juror perceptions of expert credibility? *Donal Pyne* An Existential Phenomenological Exploration of the Psilocybin Experience *Georgina H Cardo* Navigating borders of impasse: Presenting a comparison between the concepts of heuristic enquiry and tazkiyat-un-nafs
1E	C106	Helen Hingley-Jones and Irena Ceko	*Geili Elsanousi* Multiband In-Band Full Duplexing *Onome Udjo* Enhancing the alignment between user preferences and service delivery in smart homes

			Omer Faruk Kacar
			Masters by Research Ambient Assisted Living Abstract
			Amjad Alam
			Joint Energy and Spectral Optimization in Heterogeneous Vehicular Network

Parallel Session 2: 13:30 - 15:00

Session	Room	Chair	Presentations
2F	C107	Victoria de Rijke and Jayne Osgood (Self-Organised Symposium)	***Panel: Grappling with Critical and Radically Creative Approaches in Childhood Research*** *Philip Jefferies* "A book club is not only about books": how picturebooks are used to support the understanding of LGBT+ inclusion in the primary classroom *Marcellina Duntoye* The Importance of Outdoor Play for Children in Urban Spaces: a critical investigation into contemporary approaches informed by the vision of early years 'pioneers' *Sid Mohandas* Generative reimaginings of a gendered workforce: putting feminist relational onto-epistemology to work
2G	C109	Diane Purchase	*Mohammad Reza Dawoudi* Computational Ventricular Mechanics for Dissecting the Etiology of Hypertrophic Cardiomyopathy (HCM) *Dora Vidalina* The effectiveness of EZH2 inhibitors in treating Human papillomavirus associated cancers and associated pathways *Bipusha Tha Shrestha* Development of the chick chorioallantoic membrane (CAM) xenograft model to study osteosarcoma metastasis *Joseph O Omisanya* Advanced Techniques for Detecting Apnoea in Premature Neonates: Exploring Electrical Impedance Tomography and Fast Fourier Transformation
2H	C207	Stefanie Sachsenmaier	*Maryam Jabeen* Crisis Literacy and Encoding, Decoding Phenomena of Communication *Dominique C Rivoal* Witnessing as a somatic strategy of self-awareness for filmmaking *Xiaozhuo Yang* Development of Urban Performing Arts Clusters

Session	Room	Chair	Presentations
			Stefano Puppio Archeatre: Reimagining Personal Memory through Embodied Performance in Archaeology, Architecture, and Archive
2I	C104	Maxine Stephenson and Huai-Wen Chang	*Kola Taiwo* Effects of Reputation on Future Collaboration *Andrew Grimmer* A qualitative inquiry into trainee and recently qualified cognitive behavioural therapy (CBT) practitioners' perspectives on competence *Georgina Green* 'A qualitative investigation on the experiences of Kenyan counsellors using the CBT 5 aspects model with their clients' *Thanh Thi Kim Nguyen* Effects of Metacognitive Reading Strategy Instruction on Second Language Reading Comprehension and Motivation: A Meta-analysis and a Teaching Intervention
2J	C106	Paula Nottingham and Engin Yenidunya	*Kate March* Artistically Expressing Endometriosis Pain in a Medical School Environment *Elisabetta A C del Ponte* EST-ETHICA! *Ramona Pistol* Metaphor and Creative thought *Thitinart Khamyod* "Could I ask for C+ grade khâ?": Thai Students' Request Production in Academic Contexts

Parallel Session 3: 15:30 - 17:00

Session	Room	Chair	Presentations
3K	C107	Juan Carlos Augusto	*Loay A Hannoudi* The potential of the multi-angled façade system and its impact on the energy consumption and indoor climate inside office rooms *Geethu Joy* Review of Parameterization Methods in Nature-Inspired Metaheuristic Optimization Algorithms *Nkechi A Ndudirim* Critical Analysis of Integrating Digital Twins with Existing Assets' Data Systems and Platforms in Social Housing *Jacqueline Yeates* A conceptual framework for implementing Educational Data Mining in a professional body

3L	C109	Alice Donald	*Syeda Bushra Ali Rizvi* Exploring stakeholder's perceptions of physical activity to counteract metabolic syndrome of the multiethnic population of Dubai, UAE *Luke Robinson* Effects of Physical Training and Associations Between Physical Performance Characteristics and Golf Performance in Female Players: A Systematic Review with Meta-Analysis *Shannah Anico* and *Cllr Caroline Stock* Will ignoring obesity bring down the NHS? *Shannah Anico* The bigger picture for lifelong physical activity engagement
3M	C207	Kate Maguire	*Mabel B Verstraaten-Bortier* The Lived Experience of Therapists Working with Suicidal Clients in Ghana - A Heuristic Study *Laila D Baillieu* How Consulting a Medium after Bereavement Influences the Grieving Process – An Interpretative Phenomenological Analysis *Nicola C Swales* Exploring skin cancer patients' experiences of the helpful factors in psychotherapy
3N	C104	Bastien Chabe-Ferret and Yalda Chabok	*Yalda Chabok* Impact of Flow State on Cognitive, Affective and Behavioural Consumer Responses in Purchasing Experience with Augmented Reality (AR) *Noella M Lynch-Edghill* Coaching and Mentoring in Education: Developing an Inclusive, sustainable Coaching and Mentoring training programme to Improve the professional practice of Early Career Teacher (ECT) Mentors *Michael Kelly* To develop a strategic response to the UK Government's proposed changes to the administration of summary justice in England Wales *Aziza Alahmadi* Economic Empowerment of Egyptian Women: Challenges and Opportunities
3O	C106	Agi Ryder and Tricia McQuarrie	*Gunnoo Chitisha* Education for Sustainable Development in Mauritius: Embracing Equity and Ethics for Achieving the SDGs *Carlo Lazzari* Interprofessional Teamwork and Handovers in Healthcare: Developing an Inclusive and Ethical Future in Clinical Teamwork Via Work-Based Learning

			Clare O'Donoghue
			Creating a Sustainable, Authentic Professional Identity as a Beginning Teacher
			Parvaneh Delavari
			Ethnographic view on learning heritage languages

Day 2 – 5 July 2023

Parallel Session 4: 10:20am - 11:50am

Session	Room	Chair	Presentations
4P	C107	Leena Robertson	*Shicong Xie* A study of light: perception of space and time of light in experimental frame-by-frame film *Hedvika Marne* Condition of shame: Redefining approach to animals for purposes of their photographic representation *Peter Thomas* The Essay as set-breaking artistic research methodology *Matthew Maxwell* The Ghost in the Cloud
4Q	C109	Stefanie Sachsenmaier	*Tofig Shahniyarov* Promoting sustainability in international criminal law: The policy element in international crimes *Abdulrahman Hetteh* The Rights of the Ahwazi People in Iran: Historical Claims, Contemporary Reality and Future Prospects *Mary A Atito* Black British Men's Perceptions of Therapy: An Afrocentric Constructivist Grounded Theory Study *Nibarna Kannathasan* Mind the Acculturation Gap: Exploring Tamil Families' Experiences in the UK using the Tree of Life
4R	C207	Diane Purchase	*Anton Ginzburg* Constructed Geographies in Art and Visual Culture *Ruth D Gyereh* A Novel Bioactive Peptide, QUB-2392 Induces Apoptosis on Human Acute Myeloid Leukaemia Cell line, Kasumi-1 *Stephen Orwin* Developing a prescriptive exercise plan for people over 65 with Parkinson's in Care Home Facilities

			Neha N Nathaniel Development of antibody-based Biosensors for the Detection of Visinin-like Protein 1 as an Investigative Device for Monitoring Alzheimer's Disease Progression
4S	C104	Joris Gillett and Jibril Salifu	*Michael O'Driscoll* UK newspaper 'framing' of privatisation in the NHS *Denisha Seedoyal-Seereekissoon* An investigation of the use of positive versus negative message framing, moderated by gender, on charity donation: a study in the context of anti-domestic violence campaign in Mauritius *Qiong Yuan* The impact of artificial intelligence focus on firm performance: the role of R&D, marketing expenditure, top manager education level *Leanne Myers* "It's only watching it back that I can think differently about what's happening". What can 'Interpersonal Process Recall' offer to reflective practice when working with offenders with 'Personality Disorder'?
4T	C106	Liang Liu and Maria Un	*Malcolm P Bevan* The impact of floods on the professional wellbeing of emergency first responders (EFRs) *Daniela Paternina Martinez* Osteoclasts and mesenchymal stromal cells release factors that modulate migratory body formation in highly metastatic osteosarcoma cells *Adesola Akindejoye-Adesioye* Systemic societal vulnerability to coastal flooding: A case study of Eti-osa, Lagos Nigeria *David Booth* Quality by Design: An Improved Product Development Framework for Designing Reliable Medical Device Emergency-Use Auto Injectors

Parallel Session 5: 2:30 pm - 4:00 pm

Session	Room	Chair	Presentations
5U	C107	Paula Nottingham	*Tricia McQuarrie* Translating research into practice: an investigation into the translation, adaption and implementation of Contingency Management into drug and alcohol treatment services in England *Farah Ahmed* An assessment of current political tensions and challenges in the Horn of Africa, specifically in Ethiopia, Djibouti, Somalia, and Somaliland as

			a result of ongoing efforts by both the US and China to consolidate and extend regional dominance *Jibril Salifu* Value Co-Creation Approaches To Place Branding: The Role Of Digital Engagement
5V	C104	Bastien Chabe-Ferret and Stephen Egahi-Ojo Agada	*Stephen E Agada* Ushering the Virtual Age: Understanding the factors influencing the adoption of Virtual Reality Shopping applications among Generation Y and Generation Z *Stephen J Hall* A taxonomy of Knowledge Management in Micro and Small Enterprise *Faten Alzazah* Fake news detection and removal for more trusted market prediction based on the Sentiment of News and TSI via deep learning models *Cephas Mpungu* Enhanced Digital Forensics Readiness and Intelligence-lead Investigations in Big Data Wireless Medical Networks
5W	C106	Patrycja Brodka Pedro and Dandan Han	*Kajal Mistry* With Creative Eyes Towards the Future: Using Counterfactual thinking to assess student behaviours with eye-tracking technology in Higher Education *Sailendra Ramanna* EEG Signal processing using Dynamic Mode Decomposition and 1D-Local Binary Patterns *Adetunji Ademola* Preserving privacy when implementing interoperability of Electronic Health Records *Ian Kruger* Principles of Diversity as design guides for data analytics projects

Poster Presentations

Aein Khezriazizifar
Terrorism from the Perspective of Shia Muslims

Ban Ahmed
A proteomics study on the therapeutic effect of EZH2 inhibitor on head and neck cancers and its associated molecular mechanisms

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Samaneh S Serpooshan
Developing a community- level flood resilience framework using a thematic analysis approach

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Jiaqing Xu
Within and Between-Session Reliability of Performance Outcomes During the Countermovement Jump, Countermovement Rebound Jump, and Drop Jump Using Different Calculation Methods

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Iulian Chear
A phenomenological-hermeneutic enquiry into the lived experience of crossdressing

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Bassem A. Bataineh
The Role of HOXB13 Gene in Various Cancer Cell Lines

Omar O Z Zammit
Understanding Domain-Specific Student Internet Search Relevance through a Monitoring Dashboard

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Esther E Evans
Reimagining vocalization through the dislocation, alienation, and estrangement of the Black subject.

Vijay Simha Reddy Chennareddy
Extracting Key Information from Appeal Court Documents by using Transformer Models

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Faryal Batool
Quantum Computing and the Future of Healthcare Leadership

Leo Gately
The Effect of Environment, Behaviours and Habits as Drivers on the Evolution of Intelligence

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Kate McBain
Creating alongly: A transcontextual inquiry into collaborative becoming and creative practice

Oral Presentations Abstracts

Ammar A Siddiqui

Generative Machine Learning for Visual Attribution in Medical Image Diagnostics

Supervisors: Prof David Windridge, Prof Raja Nagarajan

The use of artificial intelligence models in medical science has grown in recent years to automate and optimize the work of researchers and practitioners in the field. These models are often very complex and not interpretable by humans. This leads to questionable practicality due to the high-risk decisions and human lives being at stake. The nature of training of these models often forms biases toward larger objects or higher areas of information density, leading to ignorance in regions of lower densities. As a result, complete information on the effects of a certain disease is not captured. This raises the issue of trusting these models in the diagnosis and early detection of disease. We leverage conditional stable diffusion models to generate realistic counterfactual examples of the input example, given a condition in human understandable concepts via text and/or image. Using stable diffusion models ensures that the premise of explainability is not void by perturbing the images on the pixel level, which increases the generated counterfactuals' trustworthiness.

These counterfactuals can be used to visualize the differences in the input for visual attribution improving explainability, and with powerful conditioning mechanisms and image priors, be used to predict the long-term effects of surgery, disease, and age.

Keywords: Artificial Intelligence, Medical Science, Explainable AI, Visual attribution, Counterfactual generation

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Mohammad E Hashimyar

Deep Learning based Intrusion Detection System for IoT Application Protocol

Supervisors: Dr Mahdi Aiash, Dr Ali Khoshkholghi, Giacomo Nalli

The Internet of Things (IoT) is one of today's greatest technological trends; it helps create applications to improve the quality of life. For IoTs' services to succeed, new communication protocols have been introduced at the application level, such as Advanced Message Queue Protocol (AMQP) and Message Queuing Telemetry Transport (MQTT), the most common lightweight protocols for communication between IoTs' applications. Unfortunately, cyberattacks are rapidly becoming a major threat to the IoT's security; cyber criminals are continuously exploiting vulnerabilities in IoT applications. Some of these attacks are known types of network attacks, such as DoS, brute force, and MITM attacks, while others are unique for the IoT's protocols, such as heap buffer overflow. This research aims to identify the unique signature of each threat associated with IoT application protocols by analysing system logs and network traffic. We will monitor all the features of normal and abnormal traffic to discover which fields of features remain the same for each attack's signature. By identifying the unique signature of each attack, it will be easier to detect and prevent future attacks on IoT applications. This research can also help in developing effective security measures to protect the IoT from cyber threats.

Yuehu Ji

An investigation on self-persistence in simulated cell assemblies

Supervisors: Chris Huyck, David Gamez

Cell assemblies refer to groups of neurons that exhibit synchronized firing patterns in response to specific stimuli or experiences. The concept of cell assemblies was first introduced by Hebb, who proposed that they arise as a natural consequence of synaptic plasticity. Despite being widely adopted as a prototype for the neural basis of perception, learning, and memory, there has been limited research on the structure of cell assemblies and their desired performance. This paper aims to fill this gap by computer simulation. Groups of connected spiking neurons, cell assemblies, are simulated. These cell assemblies are formed with different graph topologies, including random, small world, and scale-free networks. These networks are compared in their statistical properties and the group spiking patterns. These networks are then compared in terms of ignition time, self-persistence, and robustness. In addition, the paper discusses possible developmental mechanisms for biologically plausible cell assembly simulations, and by using excitatory neurons, the paper discusses ways to construct cell assemblies with self-terminate persistence. The underlying mechanisms and potential applications of self-terminated cell assemblies in short-term memory are also explored. The paper's contribution lies in providing insights into the structural organization of cell assemblies and how it relates to their functional properties. By comparing the performance of cell assemblies in different network topologies, the paper emphasizes the importance of structural optimization for cognitive processes, such as learning and memory.

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Uchenna A Nnawuchi

The Legal Right to Explanation in Machine Learning Context: An Old Wine in a New Wine Skin

Supervisors: Dr George Carlisle, Dr Florian Kammueller

ML algorithms have been adopted in various fields and industries as a result of their efficiency and effectiveness. They are alleged to be faster, more industrious, and less subjective compared to their human counterparts. These algorithms use vast amounts of data, curating people's information in real-time and making decisions that could in one way or another influence an individual's life. This could be as nominal as the type of advert or information people receive on their social media feed; and as significant as granting or denying a parolee bail, insurance (because of their credit scores), employment, and healthcare benefits or treatments. Notwithstanding the efficiency and, perhaps, the accuracy of ML algorithms, certain human rights concerns continue to manifest with the application and prevalent adoption of some of these decision-making algorithms. These decision-making algorithms expected to reduce human bias and error have now mirrored human frailty owing to the type of data fed into the system. And as a result, some of these systems are fraught with bias, error-ridden, and inscrutable.

These concerns have necessitated discourse on how to eliminate algorithm bias and make the system more transparent for decisional subjects and users to understand how and why the algorithms reached a specific decision. Thus, the right to explanation emerged as a persuasive appealing approach to curb some of these concerns portrayed by using some ML algorithms.

The expression "right to explanation" has provoked scholarly discourse: some scholars are of the view that a universal study of Article(s) 13, 14, 15, 22, and Recital 71 of The General Data Protection Regulation 2016 (GDPR) provide a novel right to explanation; others, argue that such a novel right does not exist in the GDPR. This novel right to explanation in Machine Learning (ML) context, regardless of whether it exists in the GDPR or not, is suggested to provide the decisional subjects with a right to challenge and context the decisions/output of ML

algorithms. Conversations on this novel right appear to be gaining traction as a result of the ubiquitous implementation of ML algorithms. However, it is contended in this research that this novel right to explanation did not emerge because of the development of decision-making algorithms, but that this right (right to explanation) has over the years taken on different forms and has been referred to as a constituent element/principle of the other rights such as the to due process of law, fair hearing, and the duty to give reason bestowed on public administrations. It is suggested in this research that this right has always existed in some form but with a limited scope. However, with the development and human rights concerns of decision-making algorithms, it is germane to rethink and repurpose this right. Finally, this research advocates for a stand-alone legal right to explanation within a broader scope in the context of ML algorithms.

Keywords: right to explanation, machine learning, algorithms, GDPR, human rights, fair hearing, duty to give reason, due process of law.

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Andrew J Waller

Experiences of Mental Health Charity Volunteers. An Interpretative Phenomenological Analysis

Supervisor: Dr David Westley

In relation to the core theme of PRSC2023, equality, ethicality, inclusivity, and sustainability are central aspects within services delivered by mental health charity volunteers. The mental health charitable sector is crucially reliant upon volunteers that provide befriending and listening support to service users. This paper presents an account of the personal lived experience of individuals volunteering for a mental health charity. Previous research into volunteer experiences and motivations has uncovered both personal benefits and rewards associated with helping. In depth interviews with six volunteers at an UK mental health charity were analysed through Interpretative Phenomenological Analysis to uncover motivations for commencing, continuing, and sustaining volunteering, and the emotional impact of positive and negatives experiences of volunteers. An overarching theme common to all participants was motivational experiences surrounding the initial decision to commence volunteering and in sustaining activity. Motives for volunteering include pursuit of satisfaction, personal development, social interaction or as a means of atonement for personal biographical discord or chaos. Threats to wellbeing, driven by the intensities of volunteering, were evident in participant testimonies. Conflict and contradictions were evident in a tension between participants' motivations and the impact of volunteering on their emotional experience.

Keywords: volunteering, mental health, experience, motivation, impact

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Sarah J S Dalrymple

Training Partner engagement for an inclusive and sustainable workforce: the case for Modern Apprenticeships in Scotland

Supervisors: Paula Nottingham, Daryll Bravenboer

Modern Apprenticeships (MAs) are at the heart of what Scotland is focusing on with young community-based learners and offering the opportunity to gain important skills in the workplace while working, learning, and earning (Skills Development Scotland, 2022). The qualifications were launched by the Scottish Government in 1994 in a bid to re-engage with 16-24 year old learners and get them back into learning (Ryan and Lorinc, 2018) in order to

improve individual and collective performance (SDS, 2018) in important local industries like catering and hospitality. However negativity from a lack of understanding puts MAs in a poor light and are referred to as ' the latest in a line of misconceived youth training schemes'(Gray and Morgan, 1994. P124) and little more that work experience (Fuller and Unwin, 2009). In this research, the unique Training Provider perspective will offer insight into the important tripartite relationship between the three parties involved in MA delivery (apprentice, employer and Training Provider) and look at how collaboration can enrich learning opportunities in an inclusive and sustainable manner. Literature reviewed has highlighted a gap in research in the close collaboration and communication (Relly and Laczik, 2021) between parties involved in the MA programme. In this presentation I would like to look at the literature that has given me the inspiration for this research and the importance of research that could enhance the educational partnerships required within sustainable and community-based workforce development.

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Tendai Gwenhure

Exploration of the experiences and perceptions of nurses at a UK Eye Hospital in considering post-graduate ophthalmic training

Supervisors: Dr Gordon Weller, Dr Liang Liu

Introduction: There is clear evidence that ophthalmic training and education provides nurses with the knowledge and skills required to deliver high quality patient care. However, ophthalmic nursing is currently not mandated, and it is not regulated by a professional body. This has resulted in inconsistencies in the uptake of the ophthalmic course where some newly qualified nurses have done the course, yet some who have worked at the trust for several years have not done it. Anecdotal evidence suggests that various factors, including organisational culture, discrimination and lack of resources have contributed to such inconsistencies.

Aim: The aim of this project is to explore factors that influence the nurses' decision to do or not to do the ophthalmic course.

Rationale: This ground-breaking research is important to gain insights into the enablers and barriers to undertaking the ophthalmic course. There are currently no studies which have explored this area, yet the critical shortage of ophthalmic-trained nurses is persistent. This research will help identify any inequities and ensure parity of access to develop a sustainable workforce.

Methodology: A qualitative focused ethnographic case study approach will be utilised. Anonymous survey of all band 5 nurses within the trust will be employed, and semi-structured interviews of a subset of 20 band 5 nurses will be conducted for data collection.

Expected findings: The study has gained ethics approval from Health and Social Care Subcommittee and from Moorfields Research and Development as a service evaluation. The study is currently at the data collection stage.

It is hoped that the findings of this research will influence equitable access to ophthalmic training, standardise training, raise the profile of ophthalmic nurses and enhance patient care.

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Ndubuisi Idejiora-Kalu

Unravelling the Microphysics of Disorders in Institutions in Post-colonial Countries using a CSH-based Transdisciplinary Systems Engineering Paradigm - A Case study of Nigeria

(*independent PG researcher)*

Supervisor: Dr Nico Pizzolato

Institutions are systems that govern the social, cultural, scientific, economic and political elements and realities of countries. For institutions to work, they must stem from the cultures and philosophies of the people. Wherein this is replaced by foreign ones, there begins an unending experimentation which results to dysfunctional and unexplainably underdeveloped societies with their associated wicked problems.

The paper introduces the use of Critical Systems Heuristics (CSH) (Ulrich & Reynolds, 2010) as an instrument of a Transdisciplinary systems engineering paradigm and a better alternative for explaining the microphysics of these disorders. Critical investigation on wicked problems experienced in post-colonial societies using this approach reveal a certain institutional failure and disorder *(a developmental dissonance)* responsible for the devastating social, cultural, economic and political realities known in popular scholarly and policy making literature as "underdevelopment". This is in contrast to the perceived "order" of societies and governments in former colonial powers and post-colonial countries like Rwanda and Botswana. This reality is to some extent responsible for the geostrategic and geopolitical stigma of "third world", "least developed countries", "less powerful or weaker states", most times used in socially and diplomatically stratifying these countries, creating imbalances and depriving them of their rights in international affairs. In the commonsense logic that a problem cannot be solved by the same problem that created it, this disorder is not "reveal-able" using traditional Machine metaphor-based Western scientific paradigm which has at its heart "reductionist" thinking (Sutton, 2023). Post-colonial Nigeria is used as a case study where disorder in socio-economic and political institutions and their functionality status is appraised.

Going by Newton's first law posits that a body will continue to be in a stable form until acted upon by an external force (the *force* which may be positive or negative); could it be that what we know as disorder is beneficial? Entropy increases when there is less attention or optimization of its original state, can disorder be "created-on-demand" and controlled (disorder management)? The approach may proffer better answers to the complex developmental questions gnawing at post-colonial societies today.

Key Words: Post-colonialism, Institutions, disorder, trandisciplinarity, critical systems heuristics

Russ Lewis

You say you want a revolution…

Supervisors: Prof Kate Maguire and Dr Alireza Kashan

Managers must transform their organisations to survive, but what's needed is the transformation of an outdated management methodology.

My thesis of 'managing tensions not people' represents a radical change from the traditionally resource-based role of managers.

I draw on *organizational ambidexterity*, an academic explanation for how managers resolve the core tension of "exploration of new possibilities and the exploitation of old certainties" (March, 1991). Ambidexterity shares a similar timeline to Agile, documenting how firms achieved ambidexterity before, and during, the digital age. Particularly interesting is how the mechanisms of ambidexterity shifted from separate structures to theories of context (culture and managers' behaviour).

Coding the literature for tensions, I identified six tension clusters that managers must manage – regardless of the age or size of their organisations: explore-exploit; variation-routine; intention-execution; illusion-reality; agility-steadfastness; exploitation-preservation. This last represents the value conflict between commercial priorities and environmental concerns; the others are intra- or inter-firm.

In this talk, I summarise my research and discoveries from the ambidexterity literature and propose a methodology for the transformation of management based on radical collaboration and inclusivity. By amplifying tension sources and leading collaborative management of those tensions, managers create the conditions for teams to achieve *ambidextrous performance*. That is, delivering *both* explorative *and* exploitative goals, being efficient in *both* varied *and* routine tasks, being *both* adaptable *and* stable in markets, and *both* exploiting natural abundance *and* preserving limited resources.

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Sarah J Bell

An Ethnographic Fiction About Trust and Interpretability in Australian Proptech

Supervisors: Nico Pizzolato, Anastasia Christou, Carlisle George

The fundamental quest of this research is to increase trust and interpretability of advanced software in Australian Proptech, a conjunctive industry at the intersection of property services and technology. As a practitioner-researcher in this context, I have explored the notion of a community of practice as both a hub of influence for implementing interpretability in future development pathways but also as a source of social learning and research. I have adopted a methodology that leverages my insider status in this community and radical creativity to perform ethnographic interviews and then I have embedded the empirical findings within an ethnographic novel, "UpTown". UpTown was created as an output of story gathering as a research process, story shaping as a method of analysis and synthesis, and storytelling as a means of disseminating the findings of this research to the community of practice in a way that is accessible and interesting for practitioners.

Keywords: Artificial Intelligence, Trust, Interpretability, Ethnographic Novel, Creative Research

Hannah Alexander-Wright

"As led". Exploring spirituality as a means to change our research for the good

Supervisors: Agi Ryder and Dave Adams

"Creativity, or the generation of novel ideas, especially ones that are useful, is essential for our survival as a species." Paulus and Nijstad (2003). It is in that spirit that I wish to use my own radical creativity and suggest a different way of looking at research.

As a Transdisciplinary Practitioner, I believe that researching towards an equal, ethical, inclusive and sustainable future requires us to use all our frames of reference: beyond disciplines and traditional academic boundaries. But is there a place for *spirituality* in research? Searching our souls, rather than just our libraries could be a way to deeper questions and answers, understanding ourselves more as a researchers, and finding different paths to exploring complex problems.

"Silence is one of the best preparations for… the reception of inspiration and guidance."
Quaker Faith and Practice 2.12

In Quakerism, the practice of silent waiting is vital in understanding what path should be taken. I suggest that in research, using silence to listen and notice which direction our spirit is telling us go is equally important, especially when we are researching for a better, more ethical future.

In my doctoral research, I plan to explore areas which use a mind and body connection to achieve successful outcomes. From meditation to interoception, Quaker Business Method to imagination and design fiction, I will explore my own practice as a professional communicator to find out what silence and listening can do to calm the cacophony of the 21st century digital workplace and ultimately help people feel better at work.

As a first-year doctoral candidate I wish to present this paper as a series of provocations, calling on my audience for questions, concerns, reactions and builds around my research.

Keywords: Mind/Body, Spirituality, Transdisciplinary, Quakers, Silence

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Lisa Champion

Dwelling Phenomenologically: An Invitation to Creativity

Supervisors: Dr Paula Seth, Dr Steven Segal, Dr Sofie Bager-Charleson, Dr David Westley

Dwelling in phenomenological philosophy throughout my PhD journey has expanded my horizons, strengthened my resolve as a researcher and changed my practice as a psychotherapist. This has led to a heightened sense of creativity and passion for writing up my research and for sharing how dwelling in phenomenological philosophy has changed me personally and professionally.

My research explores how humanistically-informed psychotherapists experience their self appearing in their therapeutic work. The term 'self' is used as a common word that refers to our own experience. The term 'appearing' refers to the moment or moments when a therapist notices aspects of their own experience in the therapeutic encounter. A gap was identified in the literature for research that explicated *how* therapists experience their self appearing, without being attached to construct or theory. The study was designed using hermeneutic phenomenological methodology. Twelve experienced psychotherapists shared one concrete experience of noticing their self appearing in their work. Analysis was conducted using a phenomenological thematic approach. The

findings revealed that therapists experience their self appearing in moments of relational disruption.   A process of working with the disruption emerged and is considered through the perspective of Martin Heidegger, a 20th century phenomenological philosopher. The study offers a new paradigm for how psychotherapists have the possibility of growing in therapeutic wisdom through the experience of noticing their self appearing in their work.

Keywords: Psychotherapy, self of therapist, hermeneutic phenomenology, Heideggarian perspective, hermeneutic circle

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Mahensingh Deonaran

How do cognitive modes of expression used by forensic witnesses affect juror perceptions of expert credibility?

Supervisors: Professor Mandeep K. Dhami, Dr Yvan I. Russell

Introduction
Juror perceptions of forensic witness credibility can be critically important because they may influence their decisions regarding expert forensic evidence—if a witness is deemed to be credible, the juror may be more likely to believe and accept their testimony. However, if the credibility of the witness is called into question, the juror may be less receptive to their opinion evidence, giving it less weight in their decisions. Consequently, the present study seeks to investigate how different cognitive modes of expression used by forensic witnesses, from well-established or less established domains of expertise, influence juror perceptions of expert credibility.

Method
300 lay people, eligible for UK jury service, are being targeted for participation in an experimental study which incorporates a 2 x 3 between-subjects design. Participants are being shown one of six criminal case scenarios involving two opposing witnesses whose areas of expertise (i.e., DNA analysis or Digital forensics) and modes of expression used to present their testimonies have been manipulated (i.e., analytical, quasi-rational or intuitive). Participants are being asked to rate one of the experts' credibility on a seven-item Likert scale for believability, trustworthiness, confidence in giving testimony, likability, knowledge, the extent to which the opinion evidence is relevant, and the extent to which the opinion falls within the expert's scope. MANOVA will be used to statistically test whether there is a significant difference between each of the six treatment conditions based on the relationship between the dependent variables (i.e., expert credibility measures) and the independent variables (domain of expertise and cognitive modes of expression).

Contributions.
The findings of this study may inform real-world policies and procedures, such as improving jury instructions. Furthermore, investigating the psychological processes involved in juror decision-making and linking the results to psychological processes alongside legal procedures can help to advance future directions and recommendations for improving jury performance.

Keywords: Jury decision-making, forensic expert credibility, cognitive modes

Donal Pyne

An Existential Phenomenological Exploration of the Psilocybin Experience

Supervisors: Niklas Serning, Victoria Garland

Over the last number of years there has been a resurgence of interest and activity around the clinical potential of psilocybin. Quantitative studies conducted suggest strong evidence demonstrating its effectiveness in alleviating distress and enhancing well-being with both clinical and non-clinical populations. Fewer qualitative studies exist but the themes and results from those studies indicate that an existential-phenomenological approach is ideally suited to capture the inherently subjective nature of the psilocybin experience and potentially illuminate mechanisms of action closer to lived experience. This study will report on the experiences of six healthy individuals who availed of a trip-sitting service in the Netherlands employing a qualitative existential-phenomenological approach to gain an understanding of the psilocybin experience paying close attention to ethical practice to minimise any potential harm to the participant. The trip-sitting service also operates a sliding scale of payment to facilitate greater inclusivity.

Themes that emerged from the data of one participant, who consumed a moderate dose of psilocybin and was interviewed one month after her journey, provided some illuminating insights. The emergent themes pointed to the importance of set and setting in providing a safe container for the experience, the manner in which psilocybin can provide release from depression, the discrepancy between prior expectations and the actual experience itself, the ways in which social conditioning can hinder authentic expression and suppress the longing for connection, the capacity of a psilocybin journey to connect to more spiritual dimensions of our being, as well as highlighting the challenges and supports associated with the integration process.

This initial finding is consistent with findings from the existing literature indicating that, under safe and supportive conditions, a moderate psilocybin dose can act as a catalyst for psychological and spiritual transformation.

Keywords: psychedelics, psilocybin, existential, phenomenological, qualitative

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Georgina H Cardo

Navigating borders of impasse: Presenting a comparison between the concepts of heuristic enquiry and tazkiyat-un-nafs

Supervisors: Dr Keith Tudor, Dr Sofie Bager-Charleson, Dr David Westley

This presentation is based on some original research undertaken during a heuristic enquiry into the lived experience of liminality amongst converts to Islam. From that research, in this presentation, I focus on the concepts of heuristic research in comparison with Islamic philosophies and practices of tazkiyat-un-nafs, to support researchers to 'to be who they are', 'create their own methodologies' and employ 'radically creative' methods to be 'seen and heard' in research towards equal, ethical, inclusive, and sustainable future.

The context and rationale for the comparison between heuristic enquiry and tazkiyat-un-nafs came about when I began to feel resistant in the research, somewhere in between my identities as a British white female, a convert Muslim, a transactional analysis psychotherapist, and a trainee Islamic psychotherapist, which includes 10 years of learning and guidance with a shaykh of tazkiyah. Resistance is a familiar feeling that many converts to Islam have reportedly experienced, and as I discovered during the research, resistance can also be experienced if heuristic

researchers divert attention away from the self-enquiry to satisfy positivist views on what constitutes as scientific research.

I present my comparison, conducted during my study, between heuristic enquiry and tazkiyat-un-nafs, which concluded with the discovery of a research methodology that acknowledged my religious beliefs (or at least did not disregard them) and was open to meaning making from a dual lens, i.e., an Islamic perspective as well as a psychological or psychotherapeutic one, positioning the researcher, and the study in between dual disciplines: psychology and religion.

The comparison addresses Muslim researchers' ongoing call for the need to decolonise research methods and offers a framework that revitalises the Islamisation of contemporary knowledge, shares my navigation of difficulties accessing and translating knowledge of tazkiyat-un-nafs, as well applying its methods, and engages in 'radically creative' ways to understand Islamic philosophies and aims through experiential, self-enquiry and, by extension, their psychotherapy practice, as a contribution to the Islamic psychology and psychotherapy movement.

Keywords: Heuristic enquiry, tazkiyat-un-nafs, integrative phenomenological research methods

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Geili Elsanousi

Multiband In-Band Full Duplexing

Supervisors: Prof Huan Nguyen, Dr Tuan Le, Prof Xin-She

Enabling multiband systems with per-band in-band full duplexing (IBFD) opens avenues for multiband instantaneous feedback sensing and streaming. This feature improves the front-end links greatly through useful feedback informing of the propagation channel status. This letter adopts fractal antenna arrays to achieve multiband-IBFD (MIBFD) antenna subsystems using hexagonal star array (HSA) geometry as a generating subarray. Characterised by concentric recurring frequencyindependent multiband self-interference cancellation (MB-SIC), the HSA geometry enables a frontier MIBFD stage at the antenna domain. The geometry provides a fractal array that acts as a generating sub-array seed to reproduce multiple IBFD-enabled and co-located sub-arrays. These frequency-independent subarrays integrate into a massive transmission array with MIBFD enabled centre. The validity of this hypothesis is tested by modelling and simulating three subarrays as a study case. Simulation results of three separately fed 4.9, 5.0 and 5.1 GHz signals as test pilots confirm the hypothesis. The optimised model achieved -35.5, -42 and -37 dB SIC simultaneously at the respective above-mentioned sub-bands. The attained integrated SIC bandwidth for the three bands is extended to cover between 4.45 to 5.85 GHz below −35.5 dB. The results of these three signals can be extended systematically to N signals, and the bandwidth is expected to increase linearly with N. The practical aperture size defines the upper bound limits of the possible signals to incorporate in the design.

Onome Udjo

Enhancing the alignment between user preferences and service delivery in smart homes

Supervisors: Prof Juan Augusto, Dr Rand Raheem

Due to its many potential applications, for example in healthcare and well-being, the field of smart homes has received a lot of attention recently. However, households that use smart home systems frequently add a variety of heterogeneous smart devices, such as sensors and devices, making it more difficult to manage and control the system, and these environments have multiple users with different expectations. Accordingly, despite recent developments in smart home automation, systems are still not very effective at differentiating between different users and tailoring the services and benefits to the preferences and needs of specific individuals in different contexts. To better align user preferences with smart home services. This work considers a system architecture that services various existing modules with brand-new ones, like an ontology and Bluetooth Low Energy beacons.

To assess the correctness and effectiveness of the enhanced user preferences handling system, a number of scenarios developed in our Smart Spaces lab will be used alongside a recently developed Intelligent Environment Quality Traceability Approach developed in our lab.

The localization layer uses a combination of sensors and algorithms to pinpoint the user's location within the home. The user preferences layer oversees capturing and storing the user's preferences, which can be used to modify the home system to meet their needs. To accomplish this, a user-friendly interface must be created so that users can easily communicate and update preferences.

As part of this project, the middleware of the current system will be enhanced to incorporate the recently created personalization services.

Keywords: Smart Homes, system architecture, context awareness, personalization, Ontology

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Omer Faruk Kacar

Ambient Assisted Living Abstract

Supervisors: Prof Juan Augusto Carlos, Dr Clifford De Raffaele

Many countries are facing challenges related to an aging population, which AAL technologies can alleviate. It is typical for AAL systems to use a middleware to integrate heterogeneous devices, but middleware is often heavy and designed for large smart systems at present. However, systems such as the current smart homes are of a smaller size and aimed at individuals (I.e., person with early dementia). Developing personalised and tailored AAL systems requires a flexible and efficient middleware. This MRes project explores a lightweight middleware for Ambient Assisted Living (AAL) systems that provides flexible and efficient solutions for the platforms in smart homes. By adopting a lightweight design, the software can be deployed in resource-constrained environments.   The middleware will be integrated into the Middlesex University smart spaces laboratory infrastructure, which includes a real-time event reasoner, a location detector, and a habit learning module, all of which will all be able to interact more effectively with one another using the middleware. A message-oriented middleware architecture was chosen instead of embedded or content-centric middleware architectures to provide processing, routing and data transformation capabilities for the devices and applications within the assisted living space. The use of a house by a user in which three daily life smart-automation scenarios will be used to test the capability of the middleware and to demonstrate how well it communicates with the heterogenous parts of the AAL system and how efficient it is.

Amjad Alam

Joint Energy and Spectral Optimization in Heterogeneous Vehicular Network

Supervisors: Dr Kamran Ali, Dr Ramona Trestian, Dr Purav Shah

With the latest developments in both automotive and communications industries, especially related to the emerging 5G networks, IoV and the adoption of Vehicle-to-Everything (V2X) connectivity led to the adoption of a Heterogeneous Vehicular Networks (HetVNets) environment. The rapid growth of data traffic and drastic expansion of heterogeneous network infrastructure leads to a considerable increase in energy consumption in the wireless communication system. Energy efficiency and spectral efficiency are the main conflicting parameters in a Heterogeneous Vehicular network in relation to energy optimisation and designing a network system is critically more challenging.

Hence my research attempted to optimize the energy utilized for each packet transmission with stochastic nature and optimized control parameters of two meta-heuristic algorithms like Particle swarm optimization and Artificial Bee colony optimization algorithm. The optimisation process is performed with the newly developed Particle Bee Colony swarm algorithm followed by the comparison of other proposed algorithms i.e., LDOD, FO, RO, and MATO in terms of energy efficiency and spectral efficiency. The performance analysis shows that the numerical results outperform the existing algorithm with 30.32% increase in spectral efficiency and 73.25% increase in energy efficiency.

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Sid Mohandas, Philip Jefferies, Marcellina Duntoye

Grappling with Critical and Radically Creative Approaches in Childhood Research

Chair/Discussants: Prof Victoria de Rijke and Prof Jayne Osgood

This panel facilitates a dialogue amongst three PhD students, their supervisors and the conference audience. The intention is for the presenters to reflect on their research journeys - each of which seeks to employ critical and radically creative research approaches to the study of contemporary childhood. The PhD students are at different stages in their doctoral pathways, each working towards unsettling normative, entrenched notions of 'childhood' by drawing from a range of philosophical, theoretical and methodological research perspectives. The panellists explore and demonstrate the complexities, challenges and possibilities of pursuing innovative and experimental approaches to researching childhoods. Their supervisors will act as discussant/chair offering reflections on the capacities and challenges involved in undertaking research in ways that sit outside of what might be normatively expected in childhood studies.

Paper 1: Philip Jefferies (supervisors: Prof Victoria de Rijke, Dr Linda Whitworth)
"A book club is not only about books": how picturebooks are used to support the understanding of LGBT+ inclusion in the primary classroom

This presentation is based upon my current doctoral research that is concerned with the ways in which picturebooks are used as a tool in primary school to support the understanding of LGBT+ inclusion issues by teachers. I anticipate gathering data from primary classrooms in 2023-2024 and propose to take up an innovative and experimental methodological design with the use of discussions that will resemble a book club scenario. This method has been chosen as it holds the potential for teacher-participants to actively engage with picturebooks and share their

thoughts, and experiences of engaging with LGBT+ issues in their pedagogical work with young children. This topic remains highly contentious in primary school settings despite efforts to increase equality in the UK through a range of policy and legal acts. Yet, the homophobic legacy of Section 28 legislation between 1988 and 2003 - that forbade the promotion of same-sex relationships in school - continues to have a lasting impact on teachers (Vanderbeck & Johnson, 2016). Queer theory will provide the analytical framework from which fresh insights can be generated that will pave the way for more radically creative approaches to engaging with children's picturebooks. The book club methodology is an important means to create space for a community of inquiry approach to explore LGBT+ issues in childhood contexts. Addressing issues of gender and sexualities in school contexts remains highly sensitive and controversial - with teachers typically lacking confidence and feeling reluctant to undertake the work. The proposed research employs a novel approach that will facilitate shared learning - in the pursuit of greater social justice.

Keywords: LGBTQ+ inclusion, children, teachers, picturebooks

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Paper 2: Marcellina Duntoye (Prof Jayne Osgood and Dr Angela Scollan)
The Importance of Outdoor Play for Children in Urban Spaces: a critical investigation into contemporary approaches informed by the vision of early years 'pioneers'

The proposed study will investigate the ways in which children's outdoor play in the early years relates to the philosophies offered by key early years pioneers (Froebel, Montessori and McMillan). Historically, these pioneers each stressed the benefits of outdoor play to children's wellbeing and educational development. The study will explore how outdoor activities take shape in contemporary early childhood contexts and to trace the ways in which these historical legacies (dis/continue) to shape the lives of child/ren in contemporary, urban contexts - and with what implications. I am at the very beginning of my doctoral research and so would welcome thoughts, reflections, and suggestions from the audience about how my research might pursue a radically creative methodological design. Currently, my intention is to include three settings: a state-owned school, a Forest school, and a Montessori school. These contrasting sites will allow for an investigation into how the legacies of the pioneers find expression in contemporary early childhood practice and influence opportunities for, and ideas about, outdoor play. This qualitative study will include observations of children's play and semi-structured interviews with staff and parents. I am keen to identify ways in which I might undertake my study that can pursue a concern with radical creativity - and so generate knowledge about children, urban outdoor spaces and early childhood learning that can shift current romanticised ideas about the innocence of 'nature', 'childhood' and 'outdoor play'. My overarching aim is to undertake research in ways that tune into the complexities of contemporary life shaped by age, social class, ethnicity and gender - and so reach other understandings about outdoor play for children in urban spaces.

Keywords: outdoor play, children, early years pioneers, early years practitioners, urban spaces

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Paper 3: Sid Mohandas (Supervisors: Prof Jayne Osgood and Dr John Barker)
Generative reimaginings of a gendered workforce: putting feminist relational onto-epistemology to work

Engaging with a feminist relational onto-epistemology, my research seeks to account for how a gendered workforce comes to matter in a North London Montessori nursery. Dominant narratives that shape gender diversification practices in the early years workforce continue to be firmly rooted in binary male/female framings (DfE, 2017), in which the recruitment of men in some ways have problematically taken centre stage through 'recuperative

masculinity' interventions. Within the Montessori context, this is complicated further by a gender-neutral framing that works to invisibilize everyday gendered relations in the nursery. By paying attention to everyday objects in the nursery such as tea, cameras and snot, I put Haraway's (2016) diffractive practice of string figuring to work, that makes visible gendered, racialised and classed stories and relations that otherwise get lost in an object through methodological individualism and human exceptionalism. A diffractive engagement thus pokes holes in a gender-neutral framing of Montessori as well as the false thesis of recuperative masculinity politics. A research that foregrounds more-than-human relations, affect and materiality enables grappling with the complex, multiple and contradictory relations that make up everyday Montessori childhood practice. Having completed my fieldwork, and entered the 'writing up' phase, I would appreciate input and feedback on the coherence of the overall argument of my thesis and ways to strengthen the connections towards radical creativity.

Keywords: gender, early childhood, workforce, relational ontology, Montessori

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Mohammad Reza Dawoudi

Computational Ventricular Mechanics for Dissecting the Etiology of Hypertrophic Cardiomyopathy (HCM)

Supervisor: Professor Richard Bayford

Hypertrophic cardiomyopathy (HCM), is a genetic disease characterised by thickening and stiffening of the left ventricular myocardium, which can result in heart failure and sudden cardiac arrest. The prevalence of HCM in the population is between 0.2% and 0.5%. Mutations in sarcomeric genes have been found to be associated with HCM. The complications of HCM, including sudden cardiac death, microvascular dysfunction, and diastolic relaxation dysfunction. The study discusses different methods of diagnosing HCM, including cardiac biomarkers, echocardiography, and myocardial contrast echocardiography. The various types of echocardiography, including transthoracic echocardiography, transesophageal echocardiography, three-dimensional echocardiography, intracardiac echocardiography, and myocardial contrast echocardiography, are also discussed. However, there is no single reliable method for the diagnosis of HCM. This study aims to analyze the effectiveness of various diagnostic procedures used for evaluating the mechanical function of the heart in patients with HCM. Additionally, the research explores potential biomarkers for HCM, such as C-KIT protein, myocardial amino acid (AA) concentration levels, and circular RNAs. The objectives of this research is to identify positive and negative correlations between these procedures and determine which ones are most effective in measuring left ventricular mechanical function. Also, investigate potential correlations between different diagnostic procedures to gain a better understanding of the diagnosis of HCM.

Keywords: hypertrophic cardiomyopathy, ECG, biomarkers, echocardiography, myocardial contrast echocardiography.

Dora Vidalina

The effectiveness of EZH2 inhibitors in treating Human papillomavirus associated cancers and associated pathways

Supervisors: Song Wen, Lucy Ghali, Nick Kassouf

High-risk human papillomavirus (HPV) is an important risk factor in the development of several types of epithelial origin cancers including cervical, head and neck, anal and penile cancers among others. Epithelial to mesenchymal transition (EMT), which affects phenotypic cellular changes, has also been indicated to be involved in the pathogenesis of those cancers alongside HPV infection. Up to now, there is still no consensus on the exact roles of epigenetic regulators in managing these conditions. As EMT has been indicated in pathological processes in cancer progression and metastasis, their aggressive and invasive cancer cell behaviour along with chemotherapeutic drug resistance was also observed from HPV associated epithelial cancers suggesting high-risk HPV infection could play a role in it. Furthermore, an enhancer of zeste homolog 2 (EZH2), a histone methyltransferase, has been found to downregulate expression of tumour suppressor genes and upregulate oncogenes, hence promoting cancer cell proliferation, drug resistance and cancer invasion.

Recent findings reported overexpression of EZH2 in HPV associated cancers, which was proposed to be correlated with involvement of EMT process and tumour metastasis. Hence, this study sets up to investigate the expressions of epigenetic changes and EMT markers in HPV associated cancers and to identify whether EZH2 inhibitors (EPZ6438 and ZLD1039) can be effective in reversing EMT process and whether this would be associated with HPV oncogene status.

Current research methods involve evaluating EZH2 inhibitor drug toxicity using cell proliferation assay, cell cycle arrest and cell apoptosis assay using flow cytometry analysis. In addition, the expression of HPV oncogenes using immunocytochemical staining was evaluated following the treatment. Further plans are to investigate molecular mechanisms in EZH2 inhibitors' pathways related to EMT process using immunocytochemical staining, western blotting and qPCR techniques. These results will be further verified using a 3D in vitro model.

EZH2 inhibitors demonstrated their effectiveness in reducing HPV16 oncogene expression, inducing apoptosis and better drug potency across all cell lines. Moreover, the percent of cells that arrested in the G0/G1 and G2/M phase of the cell cycle increased in larger effect in oral cell lines.

Keywords: EZH2, HPV, cancer, EMT, epigenetics

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Bipusha Tha Shrestha

Development of the chick chorioallantoic membrane (CAM) xenograft model to study osteosarcoma metastasis

Co-authors: Dr Lucy Ghali, Dr Beata Burczynska, Dr Scott J. Roberts, Dr Helen C. Roberts

Osteosarcoma (OS) is the eighth most frequent primary bone cancer mainly affecting children and adolescents of age 10-25 years. The survival rate for this aggressive bone cancer has not improved over the previous three decades, with chemoresistance and metastasis being the main cause of mortality. There is a need for new experimental models that can accurately recapitulate the complex process of metastasis to help to identify new therapeutic targets. Most *in vivo* models used for research are costly and time-consuming. The chick chorioallantoic membrane (CAM) xenograft model has emerged as a powerful tool for studying tumour growth and metastasis *in ovo*. In this

study, we developed a CAM xenograft model utilising an aggressive human osteosarcoma cell-line (HOS-143B cells), to investigate bone cancer metastasis.

In the optimized protocol, Day 1 fertilized eggs were incubated at 37ºC and 65% humidity for 4 days, at which point a small window in the egg shell was created. On day 7, NuOSS calcium phosphate scaffolds seeded with HOS-143B cells were implanted directly onto the CAM, and the eggs incubated for a further 6 days. At day 13 of incubation, the NuOSS scaffolds were explanted from the CAM membrane and decalcified for 2 weeks in ethylenediaminetetraacetic acid/PBS (pH 7.5, 0.5M) prior to paraffin embedding and processing for histology.

Upon staining for hematoxylin and eosin we observed tumour formation and angiogenesis within the explanted NuOSS scaffolds, therefore demonstrating that HOS-143B cells are capable of forming osteosarcoma tumors *in ovo.* Our results suggest that the CAM xenograft model may be a valuable tool for studying osteosarcoma cancer metastasis and chemoresistance and for identifying new therapeutic targets in this aggressive disease. The CAM model offers a unique combination of accessibility, rapid tumor growth, and cost-effectiveness, making it an attractive platform for preclinical drug screening and validation.

Keywords: Osteosarcoma, Methastasis, Chicken Chorioallantoic membrane (CAM), *in ovo*, NuOss scaffold.

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Joseph O Omisanya

Advanced Techniques for Detecting Apnoea in Premature Neonates: Exploring Electrical Impedance Tomography and Fast Fourier Transformation

Co-Authors: Rebecca Yerworth, Song Wen and Richard Bayford

Apnoea, a condition characterised by cessation of breathing, is a common respiratory disorder in premature neonates that can lead to severe complications if not detected and managed promptly. Previous studies investigating the detection of apnoea in infants have utilised ECG and pulse oximetry signals, which provide blood volume and heart rate changes but do not incorporate direct breathing measurements. This lack of direct breathing measurement is a limitation in obtaining accurate air volume changes in the lungs. Electrical Impedance Tomography (EIT) is a non-invasive technique that creates images of continuous measurement of surface voltage change from the injection of low-intensity alternating current and high frequency through electrodes attached to a patient's chest, and it provides a promising result in detecting apnoea episodes.

Data used in this study is obtained from subjects in centre01, being part of an observational clinical study of the larger multicentre observatory continuous regional analysis device for neonate lung (CRADL) project and assessed from cradlproject.org. The raw data were acquired from continuous impedance measurements recorded over 72 hours using the 32 electrodes Swisstom, AG, EIT device at 48 frames per second. Global EIT signals obtained from the lungs of 15 premature neonates were analysed to generate plots of before, during and post-apnoeic episodes using MATLAB scripts. The power spectrum obtained from the FFT is analysed to extract quantitative information about the EIT signal, Identifying the dominant frequencies and harmonics present in the signal, which can provide insights into the underlying physiological state being evaluated.

This study explores the potential of EIT using FFT techniques for detecting apnoea in premature neonates, and it provides a promising approach for healthcare professionals to evaluate and interpret respiratory measurements accurately and non-invasively, allowing for timely intervention and improving clinical outcomes.

Keywords: Apnoea Detection, Electrical Impedance Tomography, Neonatal Lung Imaging, Premature Neonate, Fast Fourier transformation

Maryam Jabeen

Crisis Literacy and Encoding, Decoding Phenomena of Communication

Supervisors: Dr Maja Simunjak, Dr Sophie Knowles, Prof Paul Cobley

In recent years, there has been a growing focus on various literacy concepts such as media literacy, information literacy, and digital literacy. These concepts have gained increased attention and have led to the development of new approaches specifically during and after the Covid-19 crisis. About crises, the domain of crisis literacy has not been widely explored academically. Crisis literacy also known as disaster literacy refers to an individual's ability to comprehend and apply information effectively to make informed decisions and comply with instructions related to mitigating, preparing for, responding to, and recovering from a disaster. The aim of this presentation at the conference is to describe my proposed ongoing research on "Crisis Literacy and Encoding, Decoding Phenomena of Communication". The encoding factor aims to scrutinize the extent to which media professionals potentially editors, and journalists consider the crisis literacy competencies of their audience when encoding (communicating) pandemic stories. On the decoding aspect, this study aims to explore and investigate the concepts such as the information-seeking behavior and media consumption patterns of a vulnerable population group during the pandemic leading to the assessment of their ability to decode media messages. This study planning is based on the case study of Pakistan. Consequently, this study can aid in the creation of measures that can be adapted to respond to future pandemics or crises. The study being proposed is in line with the overarching theme of the conference, which focuses on promoting an equal, inclusive, ethical, and sustainable future. The intended population for this study is the vulnerable and marginalized group, which falls under the conference's emphasis on equality and inclusivity. Given the sensitive nature of studying marginalized populations, ethical considerations will be given priority. Furthermore, the study's alignment with the sustainable future theme lies in its potential to not only contribute to the exploration of the concept of crisis literacy in line with the encoding and decoding phenomena. Also, it might help in the development of adaptable and scalable measures that can address future pandemics or crises, not only for marginalized populations but also for the broader population.

Keywords: crisis literacy; media and communication; pandemic; encoding and decoding.

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Dominique C Rivoal

Witnessing as a somatic strategy of self-awareness for filmmaking

Supervisors: Prof Vida Midgelow, Dr Stefanie Sachsenmaier, Dr Vesna Lukic

Dominque Rivoal is a Doctoral candidate developing a somatic relational filming practice, weaving together the interdisciplinary field of 'Screendance' (film and dance) with somatic movement practices, using movement, which is a common attribute for both fields, as the focus from which to cross-fertilise between these two practices. The objective of this research is to adapt and test somatic strategies of self-awareness exploring how can filming as a somatic practice encourages new ways of seeing and being with. Movement researcher Hubert Godard writes that movement is the very means from which organisms can enter in relationship with each other and the world. (Hubert Godard, 1995). Therefore, to develop the understanding of the relationality at play within filmmaking, this project places the tracking of movement at the centre of its enquiry, setting up a series of dyadic encounters between the filmmaker and different somatic movement practitioners. Movement tracking is further assisted by the camera's own capacity to record the movement of its operator, when hand-held, in relation to the movements across its'

sensor. Whereas somatic practice can develop the abilities to know oneself from within, the mutuality of the dyad offers the possibility to know oneself through another, in a relational context. For this purpose, this research is underpinned by the dyadic practices of 'the relating dyad' developed by Berner (Mind clearing) combining contemplation with communication, and the 'mover – witness dyad' borrowed from the discipline of Authentic movement (Whitehouse, Adler). A further underpinning method supporting this practice of filming, reflexive in action, is the method of witnessing, also coming from Authentic movement. The word 'witnessing' is used in a wide range of settings such as the court, journalism, therapy, and mindfulness. My presentation will firstly review its different meanings, and then delve deeper into the method of 'witnessing', as used within the discipline of 'Authentic Movement' explaining how this method develops a witness consciousness to bridge my artistic practice of filmmaking within the somatic field and create a mediated empathic gaze of being with.

Keywords: Filmmaking – somatic - witnessing – mediated empathic gaze

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Xiaozhuo Yang

Development of Urban Performing Arts Clusters

Supervisors: Prof Chris Bannerman, Dt Stefanie Sachsenmaier

The construction and development of performing arts clusters has become an important way to promote urban cultural development and the development of the performing arts industry. It is characterised by the aggregation of performing arts venues as a basic condition and a high degree of cooperation with related industries to achieve economies of scale, as exemplified by London's West End and New York's Broadway. As China's cultural centre, Beijing has set itself the goal of becoming a "City of Performing Arts" in the 2023 Government Work Report, with the development of performing arts clusters as one of the key development priorities. In such a background and context of China, the development of urban performing arts clusters is still facing various challenges, including how to achieve inclusiveness, innovation and sustainable development, and how to achieve synergy in areas such as creative incubation, talent cultivation, community outreach and commercial operations in order to build a virtuous performing arts ecology and stimulate the vitality of the performing arts. Based on this, this research focuses on the development path of urban performing arts clusters in China. Using grounded theory research methods, this study will conduct in-depth dialogues with performing artists, producers and policy makers in London and Beijing to obtain data and information, construct a development model for performing arts clusters, and make recommendations for urban performing arts and cultural development.

Keywords: Performing arts clusters; Performing industry; Grounded theory; Coordinated Development; Urban context

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Stefano Puppio

Archeatre: Reimagining Personal Memory through Embodied Performance in Archaeology, Architecture, and Archive

Supervisors: Dr Josephine Machon, Dr Sam Beale

This abstract presents an ongoing research project titled 'Archeatre', a methodology for storytelling that explores the intersection of archaeological, architectural and theatrical practices as a unique mode of performance practice

for the exploration of the relationship between space, time, memory, and identity. The research responds to the conference theme of 'research towards an equal, ethical, inclusive, sustainable future' by examining the potential of the Archeatre in fostering awareness of belonging and participation within a specific place and time, leading to new understandings and interpretations of past and present.

The research aims to explore how the methodology can serve as an artistic tool for gaining distinct viewpoints into memory reimagining and archiving, with a focus on the user experience that allows for unique user contributions to the field, making it accessible to a wider range of participants. The overarching aim is to enhance our influence on the cityscape and landscape through unique perspectives gained from Archeatre.

The study adopts a qualitative research methodology, employing a combination of autoethnographic observation in writing, drawing, and crafting methods. Through these methods, I will engage with objects and archives to provide valuable experiential knowledge on the use of performance as a means of affecting spatiality, temporality, personal memory, and identity formation.

Using my experience as a case study, the expected findings indicate that Archeatre provides a unique and innovative approach to storytelling in studio, domestic, urban, and heritage environments as contribution to the field of performance studies.

My specific aim is to illustrate practical applications of Archeatre with a focus on how this methodology can facilitate a personalised and distinctive contribution to the development of innovative approaches to storytelling and performance in museum and tourism settings.

Keywords: Archaeology, Architecture, Performance, Memory, Identity

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Kola Taiwo

Effects of Reputation on Future Collaboration

Supervisors: Dr Yvan Russell; Dr Robert Spencer

The aim of this study is to investigate the relationship between reputation and collaboration, and whether participants discount/disregard certain behaviours when deciding on collaboration. Based on research by Servátka (2010), the reputation of the recipient within a dictator had a positive effect on the altruism shown by the dictator. The data showed that the dictators send more money to recipients with a reputation for being generous than to recipients with no reputation. Within this study, participants will take part in a multi-stage trivia game with three 'virtual confederates' in which the results of the rounds are pre-determined. In some rounds, the 'virtual confederates' are designed to win and will be given 100 tokens by the researcher. They will then be asked whether they would like to share a percentage of their tokens with the participant. In other rounds, the participant is designed to win and they will be given 100 tokens by the researcher. They will then be asked whether they would like to share a percentage of their tokens with the other player (virtual confederate. The results of the other matchup and the number of tokens donated will be shown in a results section after each round. There are four conditions because we are using one of the three virtual confederates to measure the cooperation/collaboration of the participant: Generous towards all players, Selfish towards all players, Exclusive (Generous to the Participant and Selfish to the other confederates), Excluded (Selfish to the Participant and Generous to the other confederates). The dependent variable for our study is the mean amount donated by the participant to the main confederate within each condition. We believe that participants within the Generous condition will send a significantly larger number of tokens to the recipient than the participants within the selfish condition. In regards to the 'reputation

discounting', there is no previous research on the area so we predict that there will be a significant difference between the number of tokens sent to the recipients in the Exclusive and Excluded conditions.

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Andrew Grimmer

A qualitative inquiry into trainee and recently qualified cognitive behavioural therapy (CBT) practitioners' perspectives on competence

Supervisors: Dr Fiona Starr, Dr Nicola Payne, Dr David Westley

The World Health Organisation (WHO: 2022) reports that 13% of people worldwide live with a mental disorder. An extensive body of research has shown a clear relationship between inequality and poorer mental health outcomes (Friedli & WHO, 2009). Effective treatment for common mental health problems can therefore contribute towards a fairer, healthier, more prosperous, and sustainable society. Cognitive behavioural therapy (CBT) is an evidence-based psychotherapy for common mental health problems with demonstrable effectiveness (Twomey et al., 2015). A workforce of competent practitioners is required to deliver effective CBT (Clark, 2013). Existing research on competence in CBT is largely expert-produced and top-down. No detailed qualitative accounts were identified of how CBT practitioners experience the process of acquiring competence or what competence means to them. This study is the first of three looking at CBT practitioners at different points in their professional career. Cumulatively they constitute an inductive, emic, qualitative inquiry into the meaning and acquisition of psychotherapeutic competence as it is understood by UK-based CBT practitioners. This first study focuses on trainee and recently qualified practitioners. It aims to describe the diversity of experiences of training and practitioner perceptions of the ways they believe that training contributes to competence. It also intends to explore how practitioners perceive the relationship between the personal and professional selves and their contribution to competent practice. The study has received ethical approval and is currently in the process of recruiting and interviewing approximately 15 trainee or recently qualified CBT practitioners. Interviews are semi-structured and incorporate a radically creative element in the form of a photo elicitation exercise (Harper, 2002). Interviews will be analysed using Thematic Analysis (Braun & Clarke, 2006). Participants to date report that they found the interview a helpful and constructive reflective experience. The research responds to the conference theme because it has the potential to make a difference towards the way that training in CBT is conducted, such that trainees thrive and prosper during what is often a challenging time and can deliver effective psychological therapy interventions to produce a healthier, more resilient population and a more equitable society.

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Keywords: cognitive behavioural therapy, competence, training, qualitative research; thematic analysis

Georgina Green

A qualitative investigation on the experiences of Kenyan counsellors using the CBT 5 aspects model with their clients

This research responds to the 'radically creative' conference theme exampling an inclusive attitude by confronting the existing 'West is best' eclectic counselling model in Kenya that is widely-used yet suggests acculturation. A recent call from an African conference forum, (Forum of African Psychology), for a more African-owned counselling model suggests dissatisfaction with existing Eurocentric views. This research investigates *the experiences of Kenyan counsellors using the Cognitive Behavioural Therapy (CBT) 5 aspects model with their clients'* encouraging collaboration between the West and Africa. This research aims to address de-colonisation by addressing cultural blindness and positionality around white privilege attitudes and assumptions.

Introduction
This research study questions tthe potential efficacy of a Western CBT modality within the African culture and arises from my own experience living in East Africa from 2001-2014. The research is aligned with the decolonisation of psychotherapy theory and practice as it challenges traditional Western and Eurocentric views of treatment and psychological suffering and will be conducted at origin.

Aims
To investigate via the lens of Kenyan counsellors, in both urban and rural communities, their views of the CBT 5 Aspects model when using it with their clients. The findings will allow us to know more about its relevance within the Kenyan culture.

Design or methodology
The methodological design takes the ontic view of critical realism making sense of what is real and takes the epistemological positioning around interpretivism. A qualitative enquiry using Reflexive Thematic Analysis to analize the data fits with the research question. A focus group discussion will be used, comprising of two separate groups,– one in urban Nairobi and one in rural Eldoret, with around 6/7 participants in each group. This focus-group method has been selected over one-to-one interviewing as it seems a better cultural fit resonating with the Kenyan collective-society culture.

Expected findings and contributions
The expected findings will produce evidence around Kenyan counsellors' experiences, when using the 5 aspects model contributing knowledge towards the efficacy of the CBT model within the Kenyan culture.

Keywords: CBT, African-Centred, Kenyan Counsellors, Experiences

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Thanh Thi Kim Nguyen

Effects of Metacognitive Reading Strategy Instruction on Second Language Reading Comprehension and Motivation: A Meta-analysis and a Teaching Intervention

Supervisors: Dr Anna Charalambidou, Prof Johan Siebers

This project aims to identify effects of metacognitive reading strategy (MRS) instruction on second language reading comprehension and motivation by a meta-analysis and a teaching intervention. The current presentation focuses on the methodology and results of the teaching intervention. 40 Vietnamese 5th graders in 2 intact elementary classes at an English centre in Vietnam were assigned to the experimental and control groups. Both groups

completed the tests, inventories and interviews before and after the teaching intervention. The quantitative data collected from the tests and inventories, the qualitative data from the interviews was analysed by SPSS and Excel, Sonix and NVivo according to the inductive thematic analysis framework, respectively. The teaching intervention has no effects on MRS use of the control group and significantly positive impacts on that of the experimental group. There were no changes in reading motivation of the control group and two major changes in that of the experimental group. The increase in using MRS must have resulted in the positive changes in reading motivation of the experimental group as MRS activate autonomous independent learning abilities by encouraging learners to reflect on and control their own learning to make sure that their goals are achieved. Although there are small changes in reading motivation of the experimental group, the changes in their reading comprehension are large and significantly positive.

Keywords: metacognitive strategies, instruction, reading, comprehension, motivation

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Kate March

Artistically Expressing Endometriosis Pain in a Medical School Environment

Supervisors: Prof Vida Midgelow, Prof Chris Bannerman

Feel Her Pain is an artistic research project exploring endometriosis experiences in and through an improvisationally driven creative practice. Endometriosis is a painful and often chronically and cyclically debilitating disease that impacts 1 in 10 menstruators. In endeavouring to discover new articulations for pain, the research weaves the pain narratives of 6 women into a final live art concept or painscape using movement, kinetic painting, and embodied poetry. The aim for the final painscape is to explore body positions, moods, and temporalities that reveal common pain embodiments for individuals with endometriosis. Although the focus is on endometriosis, the postures and negotiations with time and space will likely be familiar to all women who endure various kinds of menstrual related pain, pelvic pain, or disabling chronic pain. In the creation of this painscape, theoretical ideas materialise through the practice, for example: the 'outing' of internal grotesqueness manifests in embodied poetry; the relationship between pain, trauma and hauntedness surfaces through traces of performance or sound score; the physical trajectories of an endo body is revealed in movement expression focusing on the lower body and space; and the brokenness and wholeness as related to resilience is felt in the interplay of the artistic elements. Aligning with this conference's theme, a discussion of this research and its methodologies implicitly demonstrates the strength and courage required in revealing the physical, emotional, psychological, and spiritual scars from such intense experiences. Indeed the art-making and dialogue generated by this project emerge as radical and feminist manifestations of healing, resilience and transformation. The focus of this particular presentation is sharing reflections and artistic process/outcome revelations from performance given to a group of medical students at the Medical University of South Carolina.

Elisabetta A C del Ponte

EST-ETHICA! A conversation on ethical artistic collaboration between humans and non human entities of the 21st century.

Supervisors: Dr Josephine Machon, Ms Alice Maude-Roxby, Dr Magnus Moar

How do we define what is 'ethical' artistic collaboration with the non-human, be it organic, animal or digital? This video screening/performance aims at a critical investigation of the above with the help of the non-human as ethical consultant. My digital puppet collaborator and I playfully reflect in & on action, and feedback to each other in a human-non-human loop, to try and find a common ground for artistic ethical collaboration. Specifically, in this interchange and transembodied exchange of ideas and energies, the nonhuman other is able to show us a path to human-non-human ethical interaction, through a surreal representation and re-enactment of life beyond human (Childs&delPonte, https:// vimeo.com/626253907). When we perform our conversations, we do it immersively: I am my digital puppets and they are me in a third, together all different - and all the same – Deluzian 'becoming'(Deluze&Guttari, 1978); and the mutuality that characterises our metamorphosis and trans-embodiment argues for a non-binary approach to the ethics of 'use' of animals - and other non-humans - in artistic practice. For this specific investigation, we will examine some of the already available literature and views surrounding the ethics on the use of animals in art, by drawing a comparison between this and the use of other non-human entities. And, together, we will try to identify some underlying factors in artistic collaboration with all the non-humans in the 21st century. Within this performance/video screening proposal, I will touch upon three main bodies of knowledge: the philosophical, with reference specifically to the theories of Rosi Braidotti, Donna Haraway and Patricia MacCormack; the legal, with reference particularly to Leslie Bisgould; and the artistic, with theorists like Gilles Deluze, Jaques Derrida, RoseLee Goldberg and Sholette. It is a uniquely devised practice and methodology ours, one that consciously seeks for and feeds on interaction with the 'other' non-human to investigate the borders, the similarities and the differences between human and non-human. Because, today more than ever, digital puppets are the in between us and the meta-anthropos.

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Ramona Pistol

Metaphor and Creative thought

Supervisors: Prof Paul Cobley, Prof Victoria de Rijke

Metaphors exist to help us experience new ideas and new perspectives. Although the mechanism of metaphor has been explained as understanding and experiencing one idea in terms of another (Lakoff and Johnson, 1980), an action that can only be carried out through imaginative processes and the consideration of possibilities (Gibbs, 2018; Littlemore and Low, 2006), the essential component of aesthetic response in the figurative comparison remains unexplored. As a neural mapping, metaphor *constructs* and *creates* rather than *describes* conditions (Johnson and Lakoff, 2002), and it works on a pre-existing similarity that needs to be discovered (Geary, 2012). The inferential processes of mapping, as a mental organisation of information in domains, support the well-established idea that metaphor is a tool of reasoning (Lakoff and Johnson, 1999; Gibbs and Colston, 2012). However, mapping seems to be insufficient in many metaphors which are novel, obscure, and difficult to explain, being often associated with symbolism and complicated connotative meanings. When seen as 'models' and 'building blocks' of our cognition metaphors remain limited to logical associations, with limited reference to the surprise that they create and their reliance on feelings and playfulness.

This paper examines the novelty in metaphor and argues that metaphor is a process of *creative discovery* through hypothetical thinking. The paper explains how metaphors arise in our imagination by using several notions from Peirce's semiotic for the logical operations that introduce new ideas. It also discusses 'resemblance' on which all the main theories of metaphor rely, an 'icon' in Peirce's (CP 2.222) terms, which may be a possibility that can only be processed through an imaginative act, a point that allows an explanation of how we process the ambiguity and multiplicity in the meaning of a metaphor.

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Thitinart Khamyod

"Could I ask for C+ grade khâ?": Thai Students' Request Production in Academic Contexts

Supervisors: Dr Anna Charalambidou, Prof Paul Cobley

Communication is conceived as an artwork that requires creativity in word choice to ensure meaning and understanding between communicators. Requests, a speech act that frequently occurs in Thai educational contexts and can be face threatening, should be properly tailored by taking social factors and interactants into account. In light of studies in the past that demonstrate the lack of students' pragmatic infelicity when interacting with their lecturers, students' requests should therefore be developed to be sustainable for future contact, whether in verbal or online chat modes. This study collected data on the participants' experiences making and receiving requests. Seventeen Thai students and five instructors participated in semi-structured interviews. One key interesting element—the production of requests by Thai students—emerged after the interview data from the subjects were transcribed and thematically analysed. The classification system proposed by Economidou-Kogetsidis (2011) served as the framework for the analysis of request strategies and external modifications. The lecturer and student data sets revealed how requests were formulated in educational settings. The lecturers' interviews provided insight into the students' request strategies, query preparatory (*Could I ask for C+ grade khâ*?), and hints (*Teacher. If I don't get this [requested] grade, I will be kicked out.*). The student participants, in comparison, highlighted the repeated

standardised patterns (i.e., external alterations like greetings, self-introductions and attention-getting + request) in both written and verbal requests. The research's findings advance our knowledge of how students formulate requests and increase both students' and lecturers' often diverging understanding of what is considered polite in educational settings.

Economidou-Kogetsidis, M. (2011) 'Please answer me as soon as possible": Pragmatic failure in non-native speakers' e-mail requests to faculty', *Journal of Pragmatics,* 43, pp. 3193-3215.

Keywords: request, request strategies, external modifications, speech act, educational contexts

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Loay A Hannoudi

The potential of the multi-angled façade system and its impact on the energy consumption and indoor climate inside office rooms

Supervisors: A/Prof Noha Saleeb, Prof George Dafoulas

This research paper is about studying and analysing the potential of multi-angled façade systems as an innovative and creative configuration to improve indoor climate and energy performance when renovating office buildings, and also as a façade component for new buildings. Many Danish office buildings built between 1960 and 1980 have high energy consumption and not well-accepted indoor climate. The thermal properties of different building components were much different than those available now. In addition to that, there are long periods during the day when there is no daylight and no view to the outside (the shading device is totally closed due to direct intensive solar radiation). The above-mentioned problems were the reason for presenting the new design concept of a multi-angled façade system which focuses on two major mechanisms: daylight penetration and solar heat gain. The configuration of a multi-angled façade system is based on dividing the room façade into two parts: a larger part of is oriented more to the north to provide more daylight and the smaller part more to the south to provide more heat gain, combined with the correct use of solar shading control systems. In order to evaluate the energy consumption and the indoor climate of the building, and the energy behaviour of the façade, the software program IDA ICE version 4.8 is used. The results of the simulation for primary energy consumption and indoor climate are different in the simulated scenarios and, as an example, the saving of the area-weighted primary energy consumption is 6.3 kWh/(m2 ·year) when using a multi-angled façade system compared to an office room with a flat façade. The simulations showed also that, while having the solar shading closes on one part of the room façade due to direct solar radiation, another part of the façade may have no shading, thus continuing to provide daylight and views to the outside on sunny days.

Keywords: Sustainable façade configuration; Building energy efficiency; pGood optical quality; High visual potentials; multi-objective optimization

Geethu Joy

Review of Parameterization Methods in Nature-Inspired Metaheuristic Optimization Algorithms

Co-authors: Dr Xin-She Yang, Dr Chris Huyck

Optimization methods play a significant role in disciplines such as Engineering, Economics, Science, and Finance. For instance, a band manager schedules locations for an international tour by considering various factors such as venue size, availability, desired countries, and cities to visit, and the maximum length of the tour. This process involves solving an optimization problem known as the Traveling Salesman Problem. Most of the real-world scenarios from industrial applications such as maximizing profit or minimizing cost or engineering design problems can be represented as an optimization problem. Once we formulate the objective function representing the problem, the next step is to find an algorithm that can help in solving the objective function. The objective function in such real-world applications is generally complex and cannot be solved in polynomial time. Exact methods can be time-consuming in these scenarios. Hence a class of approximation methods called Metaheuristic algorithms is the best approach for finding a near-optimal solution in a reasonable amount of time for such NP-hard problems. Nature-inspired Metaheuristic algorithms can be broadly classified into evolutionary algorithms, physics, and chemical systems-based algorithms, and Bio-inspired (Swarm Intelligence) algorithms. The problem-solving skills exhibited by organisms in complex scenarios relating to survival, resource acquisition, and reproduction have inspired SI algorithms. These algorithms are predominantly formulated based on how colonies of organisms interact or forage. Some of the most recent applications where bio-inspired algorithms were used successfully include deep neural network compression, antenna design, and single path planning for UAV and oil and gas exploration. However, metaheuristic algorithms consist of stochastic components, and the efficiency of metaheuristic algorithms depends highly on the parametrization process. Most metaheuristic algorithms have a predefined set of parameter values(configuration) to be used with the algorithm. These values are obtained via pilot tests where different values are tried for the algorithm's parameters, and values that give the best performance are chosen during later use of the algorithm. However, these predefined parameter values are generic and might not yield the best results for a new or unseen problem. Parameter setting methods are usually divided into online(parameter control) and offline (parameter tuning). The quality of the result obtained, the speed of algorithm convergence, or a combination of both, and algorithm robustness are considered performance metrics while evaluating the efficiency and effectiveness of the parameter setting method. Based on the existing literature on various online and offline parameterization methods, the lack of a standardized performance metric and a formal classification system is identified as the current research gap that warrants further study in this domain.

Keywords: Metaheuristics, Nature-Inspired, Swarm Intelligence, Parameter control, Parameter tuning, Algorithm Convergence

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Nkechi A Ndudirim

Critical Analysis of Integrating Digital Twins with Existing Assets' Data Systems and Platforms in Social Housing

Supervisors: A/Prof Noha Saleeb, Prof Balbir Barn

Aim of research – To investigate the benefits of integrating digital twin with the existing asset data systems and platforms in social housing and explore how this can improve the outcome and performance of retrofit projects. This paper is linked to achieving sustainability in social housing. When it comes to retrofitting, digital twin plays a significant role in helping with achieving sustainability goals in UK social housing. Retrofit projects improves

sustainability of a building by improving the energy efficiency and reducing the carbon emissions in a building while digital twin improves performance, sustainability, value for money of projects and programme by providing datadriven insight that improves decision-making. This paper is an analysis of different literatures and a comparative study of existing data management systems within social housing sector, and how digital twins can be integrated with the existing system to improve operational performance of retrofit projects and improve tenants' lives. Digital twin has transformational potentials for social housing which has been recognised and exploited by other sectors, example the manufacturing sector, but how about our social housing sector that provides more than four million homes across UK. Though the digital twin journey has been slow in the housing sector it is moving in the right direction. This literary critique and analysis will explore the different benefits that digital twins can provide to the social housing sector in terms of delivering sustainable, social and environmental benefit. Expected contributions: The paper will explore the different benefits of digital twin in social housing projects. Integrating digital twin in existing data system can improve retrofit project designs, provide cost savings, help business operations and support standardisation and regulatory compliance and improve tenants' lives.

Keywords: Digital Twins, sustainability, Retrofit, Energy Efficiency, Net zero

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Jacqueline Yeates

A conceptual framework for implementing Educational Data Mining in a professional body

Supervisor: Dr George Dafoulas

Education is a fundamental right that not only plays a pivotal role in the development of society but also serves as a powerful catalyst for driving social mobility. However, not all students have equal access to educational success. This research aims to go beyond the usual distinctions of "advantaged" and "disadvantaged" students and identify specific factors contributing to educational success. Traditional approaches used by institutions to address issues like student retention and dropout rates may not effectively support students from disadvantaged backgrounds. These students may face challenges that hinder their ability to engage fully in their studies resulting in educational disparities. To create a level playing field for all, it is crucial to identify, provide adequate support, and recognise the needs of these students. By combining educational data mining (EDM) with critical factors such as demographics, educational history, and socioeconomic status, predictive insights can be obtained to identify at-risk students early on. This information can inform the development of inclusive educational practices and interventions, benefiting a wider student population. This research focuses on a case study of one of the largest professional bodies worldwide. It will analyse a subset of 150,000 students who registered interest in studying the qualification between 2017 and 2022 across five regions. The study will begin with descriptive analysis to understand the relationship between features and student performance, then progress to predictive analysis using a mix of unsupervised and supervised learning techniques. Multiple machine learning models will be developed and evaluated based on various metrics. EDM research has primarily focused on traditional universities, leaving a gap for higher institutional establishments that do not qualify as universities but still play a significant role in education. These institutions serve as alternatives to traditional university and provide opportunities for upskilling. However, no entry-level assessments, means there is high variability in student calibre and levels. The conceptual framework developed in this study will guide other professional bodies in addressing disparities and implementing personalised learning approaches. This research has the potential to drive positive change, creating an equitable educational landscape that benefits all learners, regardless of their background or circumstances.

Keywords: EDM, framework, education, equality, social mobility

Syeda Bushra Ali Rizvi

Exploring stakeholder's perceptions of physical activity to counteract metabolic syndrome of the multiethnic population of Dubai, UAE

Supervisors: Dr Anne Elliott, Prof Tim Evans, Dr Rhonda Cohen

The aim of the study was to explore and evaluate stakeholders' perceptions of physical activity (PA) to reduce the occurrence of metabolic syndrome (MetS) which can lead to the development of non-communicable diseases (NCDs) such as heart disease, stroke, and type 2 diabetes. The rising incidence of NCDs is causing a huge burden on the economy by increasing healthcare costs and a reduction in Quality of Life. Making PA accessible to all suggests improvements for individuals, their significant others, and the wider society.

Data was collected through semi-structured interviews with 20 stakeholders concerned with MetS (10 men, 10 women; age range: 32-58 years). The sample included policymakers, gym owners, personal trainers, gym members, and non-gym-goers. Interviews were carried out either face-to-face or through Zoom. Interviews were audio/video-recorded and transcribed verbatim. The findings consist of two sections, each producing three themes,

1. Stakeholder analysis:
    a. Dubai's authorities' efforts to increase PA.
    b. Lack of MetS awareness.
    c. Facilitators and barriers.
2. Emergent analysis using the Saldana framework:
    a. The implications of living as an expatriate.
    b. Psychological distress.
    c. Cultural resonance.

The key stakeholders gave their opinions on existing PA initiatives, while the other stakeholders described the challenges they have in advocating for or participating in them. Analysis shows the lack of awareness surrounding MetS has resulted in it not being given the level of attention it deserves. The interplay between cultural and social norms can profoundly affect an individual's attitudes, beliefs, and behaviors concerning PA. It is crucial to identify strategies for enhancing PA to improve health outcomes and promote equity, ethics, inclusivity, and sustainability as all ages, genders, and income groups benefit from it. Developing tactics to mitigate and disrupt extended periods of sedentary behavior is imperative. To convey and develop PA throughout our varied community, practitioners and researchers should apply specialized and focused cultural understanding.

Keywords: physical activity, metabolic syndrome, non-communicable diseases, cultural influence, mental health

Luke Robinson

Effects of Physical Training and Associations Between Physical Performance Characteristics and Golf Performance in Female Players: A Systematic Review with Meta-Analysis

Supervisors: Dr Chris Bishop, Dr Anthony Turner, Dr Dan Coughlan

Introduction

With an increasing interest in research surrounding the efficacy of strength and conditioning interventions for the physical preparation of golfers, research is predominantly centred around the male game and the ability to understand the key physical determinants of female golf are yet to be fully understood.

Methods

A systematic literature search was conducted in four databases: PubMed, SPORTDiscus, Medline, and Cinahl. Inclusion criteria required studies to: 1) conduct a physical training intervention of any duration in female players and determine the effects on measures of golf performance (e.g., clubhead speed [CHS]), and 2) determine associations between physical performance in at least one physical capacity test and golf performance in female players.

Results

Of the 2,378 articles screened, only nine articles met our inclusion criteria. From an associative standpoint, CHS was reported in all 3 studies and associated with strength, lower body power, upper body power and flexibility (r range = -0.74 to 0.71). When assessing the effects of physical training interventions, CHS was the most reported golf outcome measure and practical differences ranged from moderate (Hedges g effect size = 0.62) to large (g = 0.85).

Discussion

Associative studies showed that strength, flexibility, balance, jump, and medicine ball assessments were associated with CHS. When examining the effects of physical training interventions, small to large improvements in CHS were evident, despite a vast range of training methods used. Of further note, numerous studies scored poorly on the quality scoring scale, indicating that greater consideration needs to be given when planning robust study methodologies.

Conclusion

It appears that CHS can be positively impacted from strength, power, and flexibility training interventions. However, with only nine studies meeting our inclusion criterion, additional high-quality research in S&C and female golf is undoubtedly required.

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Shannah Anico and Cllr Caroline Stock

Will ignoring obesity bring down the NHS

Co-Authors: Dr Caroline Stock, Shannah Anico, Dr Laura Wilson, Dr Tamara Djuretic, Dr Emma Eyre, Dr Elizabeth Smith

Supervisors: Dr Laura Wilson, Dr Elizabeth Smith, Dr Emma Eyre

Background: This is the first part of two abstract submissions to be presented in partnership with Barnet Council.

Nearly a third of children aged 2 to 15 are overweight or obese. Obese individuals are more likely to get physical health conditions like heart disease, type 2 diabetes and other serious chronic diseases including depression. Reducing obesity saves lives, as obese adults are seven times more likely to develop type 2 diabetes. Annually, £23.7 billion is spent on diabetes linked illness per year costing the NHS ~£3million per hour. Cardiovascular disease costs the UK economy £19 billion annually. These rising figures are unsustainable for the NHS. Obesity is complex with many drivers, physical activity (PA) is one modifiable risk factor together with behaviour, environment, genetics and culture.

Health behaviour patterns are often established before adulthood, so interventions delivered in school years have the potential to develop long-term benefits. Barnet Council set up Barnet's Golden kilometre (BGkm) in 2014 as an initiative to address these growing health concerns. This is a low-cost, feasible scheme involving primary children walking, jogging or running one kilometre everyday whilst at school, in addition to physical education lessons. Understanding these health implications, Barnet Council collaborated with England Athletics, Saracens Sport Foundation and Middlesex University to launch the intervention across Barnet primary schools with the aim to implement the scheme into daily curriculums.

The aim of this presentation is to highlight the importance of interventions for lifelong health and wellbeing and provide insight into the BGkm collaboration project. As to date there has been no research looking specifically at physical literacy (Long-term PA) together with school-based interventions. To explore the impacts of participation, Barnet Public Health have funded PhD research at Middlesex University which investigates teacher and children's physical literacy over an academic year. During the discussion the early conclusions will be presented and detailed methods and results highlighted in the second session.

Conclusion: For schemes to be successful, active engagement is needed from communities, schools, families and individuals. BGkm is a unique collaboration between organisations which is necessary to achieve a PA legacy from infant to adulthood.

Keywords: Physical activity, Osbesity, Diabetes, Children

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Shannah Anico

The bigger picture for lifelong physical activity engagement

Co-authors: Dr Laura Wilson, Dr Tamara Djuretic, Dr Emma Eyre, Dr Caroline Stock, Dr Elizabeth Smith

Background: This submission is the second part of two abstract submissions to be presented in partnership with Barnet Council. Barnet's Golden kilometre (BGkm) has been established as a feasible, low-cost physical activity (PA) initiative, involving primary school children walking, jogging or running one km every day whilst at school, in addition to physical education lessons. Physical literacy (PL) has been highlighted as more important than solely physical elements needed to maintain a healthy lifestyle. Identifying initiatives that are likely to encourage progression in PL from a young age is deemed important to encourage regular PA participation throughout life. School-based interventions exist to improve PA and develop PL, however often lack longevity (due to reliance on continued funding, external support, research termination). Therefore, the purpose of this study is to examine how BGkm intervention is implemented in primary schools and the influence participation has on pupils PL journeys.

Method: Five teachers took part in semi-structured interviews. 111 Children participated in PL outcomes including: anthropometric measures; waist to hip ratio, height, mass, body fat percentage, fundamental movement skill (FMS) assessment, PA accelerometers, focus groups (n=20) and a well-being and lifestyle questionnaire.

Analysis: *Quantitative:* Descriptive statistics were conducted to identify averages and provide comparable data. Overall project data collection, baseline, follow-up (6 month) and end of term assessments were conducted, and control schools used for YR6. One-way repeated measures ANOVA will be presented to identify changes in all the above quantitative measures.
Qualitative: Thematic analysis was conducted using Nvivo12 software to establish general dimensions and subsequent themes for teacher interviews and child focus groups.

Results: Child preliminary results show changes related to PL, including themes developed in teacher interview relating to perceived experiences, pupil PL outcomes as well as teacher attitudes, fidelity/adherence, logistics, and intervention suggestions.

Conclusion: A key finding shows that a self-select pace is key in encouraging pupil motivation and confidence. The simplicity of design and flexibility are also contributors to PL implementation and longevity. Future health and wellbeing of individuals is dependent on implementation of regular PA delivered in conjunction with a supportive environment.

Key words: Physical Literacy, Lifelong, School, Physical activity, Children

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Mabel B Verstraaten-Bortier

The Lived Experience of Therapists Working with Suicidal Clients in Ghana - A Heuristic Study

Supervisors: Dr Simon Cassar, Dr Julie Scheiner

My research on *The Lived Experience of Therapists working with Suicidal Clients in Ghana* is closely related to this year's summer research conference theme - ***Radically Creative: Research towards equal, ethical, inclusive and sustainable future***.

For instance, the research methodology I employed for my thesis - the Moustakas' Heuristic Inquiry is a very creative and inclusive methodology. It allows for the use of poetry, artwork and excepts from personal journals to be part of the research method. These techniques are most often judged as un-academic. Another unique feature of the methodology is that the researcher is also a research participant. This inherently brings about inclusivity and a balance of power between researcher and research participants. Studying psychotherapy in London, UK, and having my placement practice in Cape Coast, Ghana (which lead to my research topic), meant that I had to find ways to work coherently with the sometimes conflicting cultural differences I encountered in both my psychotherapy practice & supervision, and my research work. This required radical creativity and courage to pull off.

One of the key findings of my research was that there was a disconnect between what suicidal persons attributed to their becoming or being suicidal (which was usually some form of hardship) and how suicidal triggers were portrayed in suicide prevention campaigns by the professionals. The latter always attributed suicidal behaviour to depression. Therefore, there seems to be an epistemological gap between what professionals say about suicide and what suicidal clients themselves profess to be their lived experience. This then is a form of epistemic injustice in which the lived experience of suicidal persons are dismissed, belittled and even negated by the very professionals

attempting to help them. My research proposes then that mental health advocates, therapist as well as suicidal persons need to be epistemic equals in the fight against suicide.

Keywords: Heuristic Inquiry; Suicide; Psychotherapy; Ghana; Epistemic Injustice

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Laila D Baillieu

How Consulting a Medium after Bereavement Influences the Grieving Process – An Interpretative Phenomenological Analysis

Supervisors: Dr Susan Iacovou, Dr Vaughan Dutton, Dr David Brazier, Dr Julie Scheiner

The purpose of this study was to explore the influence of 'assisted' after-death communications (ADCs) (that is, through a medium), on the grieving process of the bereaved. It also sought to explore the existential dimensions experienced by the bereaved. Six bereaved participants in the UK who had experienced assisted ADCs took part in semi-structured interviews. The data was analysed using Interpretative Phenomenological Analysis (Smith et al., 2009). The emerging themes were: 1) Pain and Loss (living with grief after the bereavement); 2) Being with Others; 3) The Unknown; 4) Religious/Spiritual Beliefs and 5) Reflections on Life and Death after Assisted ADCs. Key findings showed that the participants were able to form a continuing bond with the deceased through spontaneous and assisted ADCs, which was comforting. More specifically, assisted ADCs (medium readings) facilitated 'bilateral communication' for resolving unfinished business, reassurance,and giving advice. A novel finding was a discarnate who communicated (through the medium) about his life in the 'other world.'

The existential analysis showed that a continuing bond was a complex transition experienced in all four dimensions of existence (physical, personal, social and spiritual). The findings also showed that becoming bereaved was an ontological experience for the participants, who became very aware of aspects of their existence, including beliefs, meaning and purpose, and their mortality. The implications of the findings relate to the necessity for counselling professionals and mental health practitioners to understand and acknowledge the reality and potentially positive role that ADCs play in managing grief and supporting those experiencing them without judgment.

Keywords: Bereavement, grief, continuing bonds, medium, assisted ADCs, after-death communication, existential phenomenology

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Nicola C Swales

Exploring skin cancer patients' experiences of the helpful factors in psychotherapy

Supervisors: Dr Nicky Payne, Dr Elvis Langley (Metanoia), Dr Sofie Bager-Charleson

How your research responds to the conference theme

Having undertaken a systematic literature review specific to skin cancer patients lived experiences of their illness and experiences of psychotherapy, I observed a gap in the literature specific to the helpful factors in psychotherapy. My research will partially fill this gap, contributing towards equality in this specific area of cancer. A qualitative methodology was chosen in order to include participants contributions from their own lived experiences.

Introduction to provide a rationale for your research

My research was borne out of experiences of working with skin cancer.

Aim(s) of your research

- Explore skin cancer patients experiences of psychotherapy with a focus on the helpful factors.
- To build a theory of how to work therapeutically with such patients from the data and help inform my profession.
- Give skin cancer patients a voice.

Research methods used or planned

I am using constructivist grounded theory (CGT), a qualitative methodology. CGT can be thought of as a flexible, focused and reflexive approach to conducting research offering a set of principles, guidelines, strategies and heuristic methods. I have been using intensive interviews with skin cancer patients and intend to hold two focus groups, one with patients and another with psychotherapists to member check the data. I have conducted four intensive interviews, and aim to undertake 12 in total. The unique aspect of this methodology is the way in which the coding of the data builds a theory, which can be tested out within memo writing, a reflexive tool and key feature of grounded theory. The focus groups will provide a forum to further test the theory in keeping with the reflexive nature of grounded theory.

Current or expected findings and contribution

Preliminary findings from intensive interviews are:

- Importance of the therapeutic relationship in the process of psychotherapy.
- Importance of the therapist understanding skin cancer and treatment process.
- Coping strategies seen as helpful.

I expect that future interviews will show similar findings and I will reach saturation with the data – contributing towards a theory to support therapeutic practice in this area.
Keywords: Skin Cancer, Lived Experiences, Psychotherapy, Diagnosis, Constructivist Grounded Theory.

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Yalda Chabok

Impact Of Flow State on Cognitive, Affective and Behavioural Consumer Responses In Purchasing Experience With Augmented Reality (AR)

Supervisors: Dr Simon Manyiwa, Dr Costas Priporas, Prof Charles Dennis

This study examines the impact of augmented reality (AR) on consumer experience through the lens of flow theory. There is a growing interest in AR, however, understanding of its implementation and utilization remains elusive (Rauschnabel et al., 2022). With AR's projected market value of $198 billion by 2025 and 3.5 billion potential users globally (Alsop, 2022), it's crucial to understand consumers' experiences and adaptation to AR (Chylinski et al., 2021). Nevertheless, hurdles like customer privacy concerns (Rejeb et al., 2021; Dacko, 2016) and perceived need

for specialized knowledge (Hilken et al., 2022) limit its widespread uptake. The study have three main objectives: investigating AR's influence on flow state and consumer outcomes; establishing the effect of AR-induced flow experiences on shopping intentions; and evaluating the role of privacy concerns in AR flow experiences. Data will be gathered from 780 UK adults using an online questionnaire after exposure to a commercial AR stimulus on Kivisense AR shoes virtual try-on website, with Structural Equation Modelling (SEM) employed for data analysis. The pilot study with 315 participants offered important insights into the relationships among AR features, telepresence, flow, cognitive and affective outcomes, and purchase intention. The findings demonstrated significant relationships for the majority of these variables; however, the relationships between vividness and telepresence, as well as usefulness and purchase intention, were not significant. These findings support the feasibility of the larger research project while also highlighting areas that may require further investigation. Additionally, the pilot study's outcomes confirmed that the questionnaire was an appropriate method for data collection. The study aims to contribute by enhancing comprehension of AR's role in consumer experience and decision-making, providing theoretical contributions to consumer behaviour studies within the AR context, offering practical insights for managers about user experience, and addressing privacy concerns to promote wider AR adoption. It also explores AR's potential in crafting immersive shopping experiences leading to higher conversion rates and customer satisfaction. This research can bridge the knowledge gap regarding AR's role in consumer behaviour, significantly contributing to the theoretical and practical aspects of AR adoption in the retail industry.

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Noella M Lynch-Edghill

Coaching and Mentoring in Education: Developing an Inclusive, sustainable Coaching and Mentoring training programme to Improve the professional practice of Early Career Teacher (ECT) Mentors.

Supervisors: Dr Nico Pizzolato, Dr Julie Haddock-Millar

The aim of my research project is to identify and explore the key issues of concern for the key stakeholders involved in the Early Career Induction programme for Early Career Teachers (ECTs). This I believe is an essential step towards enhancing the current professional development opportunities for Early Career Teacher (ECT) mentors. An important aspect of my work has led to the development of an inclusive, ethical, sustainable professional development coaching and mentoring training framework/toolkit (artefact). This artefact has the potential to be utilized and embedded within the professional instructional training programme provided within the current 2-year statutory Early Career Teacher (ECT) Induction programme.

Statutory induction was introduced in England in 1999, as part of the wider recruitment and retention strategy for Newly Qualified Teachers (NQTs) as a support framework from initial teacher training to a professional career in teaching. In September 2021, the Early Career framework superseded the Newly Qualified Teacher (NQT) Induction programme, after which Newly Qualified Teachers (NQTs) are now referred to as Early Career Teachers (ECTs). Action research was the strategy used in association with a multi-method approach utilizing qualitative and quantitative methods. Initial research findings indicate that increased numbers of early career teachers are leaving the profession within the first 2 years due to increased workload, increased demands imposed by the revised early career induction programme, and the variability and inconsistency in ECT mentor support.

This research is important as it has the potential to contribute to the retention rates of early career teachers (ECTs) and reduce the variable nature of ECT mentor support by improving the coaching and mentoring knowledge, skills, and behaviours of ECT mentors within primary and secondary schools across the UK through sustainable coaching and mentoring practices.

Michael Kelly

To develop a strategic response to the UK Government's proposed changes to the administration of summary justice in England Wales

Supervisors: Dr Andrea Werner, Dr Dave Adams, Prof Kate Maguire

An equal, ethical, inclusive and sustainable future will require strong institutions that promote justice. This transdisciplinary research project aims to develop a strategic response to the UK Government's proposed changes to the magistracy of England Wales. The magistracy is critical to the administration of summary justice with 95% of criminal cases being dealt with by 12,000 volunteer magistrates (also known as Justices of the Peace) Over the last decade the number of magistrates has fallen from 30,000 to the current 12,000.

The UK Government has announced a likely public consultation in autumn 2023 on the reform of Local Justice Areas. These reforms have the potential to fundamentally alter the way magistrates' courts are organised as well as the professional landscape for magistrates. Potential implications could relate to physical proximity of courts for victims, defendants and professional court users thus requiring a consideration of access to justice itself. In addition, reform could critically impact on the professional landscape of magistrates raising questions around retention, recruitment, workplace wellbeing and caseload of these volunteers.

My project, contributing towards the Doctor of Professional Studies, will draw upon my professional, corporate experience and skillset - as an international corporate lobbyist, strategist and communications leader - and my experiences as a serving leadership magistrate navigating the preparation and response to the Government's consultation. The work of the research project will be to develop a practice led, strategic, response that seeks to inform the debate around Government reforms to the administration of summary justice in England and Wales. I will also develop an accompanying scholarly critique.

Keywords: summary justice, magistrates, reform, transdisciplinary, professional studies

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Aziza Alahmadi

Economic Empowerment of Egyptian Women: Challenges and Opportunities

Supervisor: Prof Kate Maguire

This research focuses on women's economic empowerment (WEE) in a particular developing region of the world. It was undertaken in the context of women becoming increasingly recognized worldwide as a driving force in pushing societies forward in terms of economic growth. They are no longer seen as mere consumers who take a back seat in socio/economic development. It is not new that both Government and Non-government organizations (NGOs) have been striving to design and deliver programs to empower women, including educational, training and entrepreneurship programs and meet UN goals for sustainability and gender equity. However, examining WEE in developing countries still requires significant effort towards identifying challenges whether social, economic, or cultural. This is particularly true in a region that is being pressurized by an unprecedented globally connected and changing world, to shift culturally, socially and politically.

I have taken three areas of Egypt as an example of relevance to Arab countries in the Middle East and North Africa (MENA), partly because this particular country, due to its location and rich history, mirrors the traditions, values and culture of many other Arab countries in the region. My research set out to find whether any of the significant changes in the region have impacted WEE, and how. It also I explores the current challenges and presents unexploited opportunities.

The demographic and socio-economic information collected from women indicated their current status of the household, financial conditions, constraints, and limitations. The key findings highlighted what women consider to be their fundamental activities and the factors driving those decisions. Women's education ranged from basic to high with a number of challenges overlapping regardless of education status. The research also revealed how different regions are affected by similar or different factors when it comes to WEE accessibility and impact.

With regards to methodology, my choice will be qualitative through recording and analyzing narrative contributions of groups of women in the examined region.

Keywords: Women's Economic Empowerment, Egypt, Education, Business, Challenges and Opportunities

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Gunnoo Chitisha

Education for Sustainable Development in Mauritius: Embracing Equity and Ethics for Achieving the SDGs

Supervisor: Dr Rout-Hoolash

This research aims to investigate the potential of ethical and equitable education in Mauritius to contribute to the achievement of selected Sustainable Development Goals (SDGs). Specifically, the study focuses on SDG 1 (No Poverty), SDG 4 (Quality Education), and SDG 10 (Reduced Inequalities). By closely examining the existing educational landscape and engaging relevant stakeholders, the research seeks to identify effective strategies and policies that can foster positive change.

The study entails an in-depth exploration of the perspectives and experiences of key stakeholders, including university administrators, educators, policymakers, students, and community members. Through surveys, interviews, and participatory workshops, valuable insights will be gathered to understand the current state of ethical and equitable education in Mauritius. Furthermore, the study will critically analyze the alignment between existing university policies and the targeted SDGs, assessing the gaps and opportunities for improvement.

By involving stakeholders at various levels, this research aims to foster collaboration and collective ownership of sustainable development initiatives. It seeks to empower educators to integrate ethical and equitable principles into their teaching practices, create inclusive learning environments, and address the multidimensional aspects of poverty and inequality. The study also recognizes the potential of education in promoting social and economic mobility, thereby contributing to poverty reduction and a more equitable society.

The findings of this research will have tangible effects on the current educational landscape in Mauritius. The recommendations derived from the study will inform the development or enhancement of policies, curricula, and teaching methodologies to align with the targeted SDGs. By fostering awareness and providing practical guidelines, the research will equip stakeholders with the tools necessary to implement positive changes within their respective

domains. Additionally, the study aims to promote cross-sector collaboration and encourage partnerships among educational institutions, government bodies, and community organizations.

The ultimate goal of this project is to transform Mauritius by laying a solid foundation for moral and egalitarian education. The goal of the study is to help create a more inclusive and sustainable future by empowering stakeholders to solve issues including poverty, inequality, and the lack of access to high-quality education. It is an invitation to all interested parties to actively participate in creating a progressive educational environment that supports the goals of the chosen SDGs.

Revisions made include:

1. Specified the selected SDGs (SDG 1, SDG 4, and SDG 10) to focus the research on particular dimensions of sustainable development.

2. Identified key stakeholders, such as university administrators, educators, policymakers, students, and community members.

3. Highlighted the potential effects of the study on the current situation by emphasizing the impact on policies, curricula, teaching methodologies, and cross-sector collaboration.

4. Emphasized the transformative nature of the research and its contribution to a more sustainable and inclusive future.

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Carlo Lazzari

Interprofessional Teamwork and Handovers in Healthcare: Developing an Inclusive and Ethical Future in Clinical Teamwork Via Work-Based Learning

Supervisors: Prof Carol Costley, Prof Elda Nikolou-Walker

How this research responds to the conference theme. We propose how to implement equality and ethics in interprofessional teams and democratic participation in team communication and how to reinforce the involvement of all healthcare professionals, with a politic of inclusion in decision-sharing and handover communication in healthcare organisations.

Introduction. A collaborative approach across interprofessional healthcare teams and democratic participation in handover communication enhance person-centred treatment, safety and quality of care[1]. Handovers are sharing responsibilities and information among health carers about communal patients. Interprofessional teams are persons from different healthcare professions collaborating on mutual clinical goals.

Aims. To reflect on published research on work-based learning to generate middle-range theories suggesting *how to* promote collaborative care, shared decision making and informative handovers in clinical settings and a politic of inclusion, participation and ethics in interprofessional teams.

Methods. Practice-based evidence approach responded to how-to questions[2]. We reflected on work-based learning, autoethnography and participant-observer ethnography with thick descriptions of interprofessional events, handovers, and tacit knowledge.

Findings. We found that any bottlenecks in interprofessional practice reduce information sharing and handovers and endanger the quality of care and patient safety. Intraprofessional bottlenecks occur when health carers communicate and interact primarily or exclusively with colleagues from the same educational background (e.g., nurses with nurses, doctors with doctors), interprofessional bottlenecks when this occur within professionals at the same level of seniority (e.g., a senior nurse with a senior doctor). In this case, there is a loss of patient data during interprofessional handovers endangering patient safety, reducing the quality of care, and slowing recovery pathways.

Conclusions. Healthcare governance can overcome preventable medical errors, reduce gaps in care, and allow population health through politics of empowering democratic and inclusive participation of all health professionals in knowledge sharing and handover by addressing bottlenecks' values.

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Clare O'Donoghue

Creating a Sustainable, Authentic Professional Identity as a Beginning Teacher

Supervisors: Dr Lee Jerome, Dr Paul Gibbs

The well documented on-going recruitment and retention crisis of UK school teachers shows that for many prospective and qualified teachers, working conditions are not perceived to be sustainable, equitable or ethical. This paper reports on the first round of data collection in a grounded research doctoral study on how beginning teachers conceptualise their own professional identity. Teaching practice journals of 15 beginning foreign language teachers representing 450 hours of teaching practice were used to create a corpus of 125,071 words which was processed using corpus linguistics tools to determine themes evident in the language patterns used to reflect on teaching practice lessons. Contrary to published research, findings showed beginning teachers were more concerned with their students' well-being in class than with themselves. Key Word in Context (KWIC) function was used to identify 1,620 corpus extracts of interest. 723 of these were manually coded using Markus & Nurius' 'Possible Selves' theory to explore how beginning teachers conceptualise their developing teacher identity. Findings indicate that where beginning teachers are in a 'good enough holding environment' which fosters their personal agency they thrive: They are largely optimistic and forward looking in their agentic professional self-development as evidenced by their teaching practice journal entries which predominantly focus on their self-determined 'ought-to' selves (i.e. what they believe other stakeholders such as students and employers expect of professional teachers) and their ideal selves (i.e. their own personal vision for an ethical and sustainable professional teacher identity that is congruent with their values and personalities). These findings, gathered from beginning teachers predominantly working in the more loosely regulated English as a Foreign Language sector, contrasted strongly with subsequent data collection of beginning teachers in UK state school placements where scope for personal agency is much reduced thus limiting the degree to which they can exercise radical creativity.

Keywords: Beginning teachers, Possible Selves Theory, Professional identity construction, Personal agency, Reflective practice

Parvaneh Delavari

Ethnographic view on learning heritage languages

Supervisors: Dr Leena Robertson and Dr Gillian Lazar

Ethnographic view on learning heritage languages Heritage language learning is very important among immigrant families. Heritage languages are not part of the national curriculum in the state education system. Therefore, in keeping with school systems around the world here in England these languages should be taught separately. Supplementary schools try to provide an educational and cultural environment by teaching heritage languages that benefit immigrant families. These voluntary community organisations operate only after-school hours, but their work remains hidden from the teaching profession and education policymakers. While these schools are decolonising language teaching practice and contributing to more inclusive ways of thinking. If heritage languages were treated as modern foreign languages and speakers of these languages were allowed to promote their cultural values, it would create equality and equity in society. One of the challenges is the current students who are second and third generation of immigrants and do not perceive the heritage language as their dominant language. Also, teaching approaches are mainly in favour of the monoglot approach which creates a limitation in learners' comprehending. While language learners use their entire linguistics repertoire to understand better. This translanguaging happens naturally in the classrooms. The heritage language with a monoglot teaching approach seems like a wall in students' minds. This is an unnatural way of communicating for multilingual people and not sustainable. This is a barrier for these learners which demotivates them. This study proposes using translanguaging as a radically creative tool that let the students use linguistic repertoire to boost their understanding and increase their involvement and having better performance. Also, this tool can increase the inclusivity of student and provide them with equal opportunity to learn better. This study looks at a Persian supplementary school through an ethnographic lens. It studies the context of the classroom, relationship, events, and participants and finds out how students apply natural translanguaging and what is its impact on the learning process. This way of using a natural tool that is been used by students could be promoted by teachers and be used as a creative tool in teaching heritage languages at supplementary school.

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Shicong Xie

A study of light: perception of space and time of light in experimental frame-by-frame film

Supervisors: Dr Anne Robinson, Dr Tansy Spinks

This research is practice-led, exploring temporality and spatiality in both film art and "Lumia", a light art exploiting light to transmit transparent materials as optical transformers for achieving the temporality of light. Given that spatiality and temporality are two significant areas of research for Lumia and film, this research uses the phenomenological bodily experience of space and time to describe how the language and mechanics of experimental film might challenge the classical experience of time and space in light art. Traditionally, the bodily experience of time in Lumia is a single-linear temporal experience, whereas the film, as a medium composed of sequential frames, has more flexibility in shifting this temporal structure by manipulating the frames. To destruct the single-linear temporality of Lumia, a five-screen cinema employs different modes of frame gaps as disappearing time, presenting an experience of multi-temporality. These five films capture the same movement of Lumia while applying five mathematical systems in "Structural film" on frame gaps on each film to obtain multi-temporality. Simultaneously, the dislocation of five screens as a multi-screen form in "Expanded Cinema" is to create a spatiotemporal experience. This practice connects the light temporality with the film language to test how the frame

gap affects our temporal perception of light. Also, this practice-led research is interdisciplinary, breaking the boundaries of light art and film art via thinking temporality radically and creatively within the interconnection of these two mediums. Practice becomes an essential and radical strategy in this research and the research question is addressed by the combination of creative knowledge and textual knowledge which describes the nature of the artworks based on philosophy. This creative and radical research method offers an option for researchers to break the stereotype in traditional research methodology.

Keywords: time, space, perception, light, film

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Hedvika Marne

Condition of shame: Redefining approach to animals for purposes of their photographic representation

Supervisors: Dr Anne Burke, Prof Ergin Cavusoglu

Recent critique of anthropocentrism stems from the concept of the 'man as the measure of all things' in ancient Greece, Renaissance, Enlightenment and so on. The concept based on underlying assumptions that worked gradually to exclude people of colour, non-Europeans, women and animals. Excluded people were pushed invariably to the margins of cultural life by being considered not agents but merely objects of knowledge and art. Absence of corrective approach to marginalisation of animals led to their unnecessary suffering and subsequently to a loss of many species. It was never sustainable. In 1997, Jacques Derrida foreshadowed today's posthumanism, when he used his deconstructive approach to challenge a deeply rooted assumptions of human superiority to animals in a series of lectures for the conference in French Cerisy. He revisited literary representations and philosophical concepts of animals to expressed deep reservations about philosophers who were writing on the subject as if not looked at directly by an animal, without experience of shame felt if looked at by an animal and shame of being ashamed by their gaze. The hunch that we are being seen, scrutinised and known by animals, pointed to a shift in our understanding of them. Since then, scientists researching cognitive abilities of animals challenged centuries lasting views of animals as beings without conscience. I am asking what the implications of this idea are for representation of animals. How would it alter images or other visual representations of animals, if we stop following them with the long lens and start interacting with them while respecting their autonomy.

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Peter Thomas

The Essay as *set-breaking* artistic research methodology

Supervisors: Dr Anne Burke, Prof Ergin Cavusoglu

An important aim of my PhD is to develop an essayistic methodology for my artistic research practice. In my conference presentation I will consider the extent to which this aim is radically creative.

My paper will outline how I define the essay, through a discussion of a selection of forms and practices of the essay that have been exploited and written about by essayists from across disciplines. For example, I will draw on

Adorno's apparently contradictory notion that 'the essay proceeds … methodically unmethodically' (1991/1958: p.13).

My paper will also touch on how I have applied my developing understanding of the essay to my own artistic research. I will do this with a brief contextualisation of 'artistic research', and with examples of my own artistic output. To link my research to the theme of the conference, I will use Weisberg's definition of creativity as 'intentional novelty' (cited in Brandt, 2021: p89); and Madjar, et al.'s definition of radical creativity as a form of creativity that is 'set-breaking' or 'divergent' from existing practices (see Madjar, et al., 2011: p.731).

The main question that I will attempt to answer in my conference paper is: How setbreaking is the essay as an artistic research methodology?

Keywords: Essay, methodology, artistic research, incremental creativity, set-breaking creativity

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Matthew Maxwell

The Ghost in the Cloud

Supervisors: Dr Vlad Morariu, John Timberlake

This research project aims to explore the impact of Artificial Intelligence (AI) on Creativity. Specifically, it will investigate the potential of using neural networks as creative collaborators in artistic practice. My mixed mode research will examine new ways of using artistic methods to explore and use Generative AI as both a medium of expression and a resource of inspiration and example. Through active art practice and critical analysis of emerging trends, I will examine how AI can enhance, augment, or disrupt traditional creative practices and how we understand the creative process. My ambition is to explore the complex interplay between AI and creativity, and to contribute to a better understanding of the role these technologies will play in shaping the future of art and culture and the wider societies they represent.

'We used to argue whether a machine could think. The answer is "no". What thinks is a total circuit: A machine, a human and an environment.'

Gregory Bateson Mind and Nature, a necessary unity *Copyright © 1979 by Gregory BateJonISBN: 0-525-15590-2*

Keywords: Artificial Intelligence, Generative AI, Creativity, Art and Design

Tofig Shahniyarov

Promoting sustainability in international criminal law: The policy element in international crimes

Supervisors: Prof William A Schabas, Dr Anthony Cullen

The definition of core international crimes - genocide, crimes against humanity, and war crimes - plays a pivotal role in ensuring that international criminal justice contributes to a more sustainable future in terms of ensuring consistency, fairness and legality by examining these definitions appropriately. However, the current wording of the relevant provisions that define the exact scope of these international crimes in international criminal law instruments lacks clarity in terms of understanding their difference from ordinary criminality. The contextual elements of core international crimes, such as a plan or a state or organizational policy, a pattern of similar conduct, a magnitude, or a collective character of acts, are not necessarily considered legal ingredients of these crimes and are often referred to as surrounding elements by academia and international criminal tribunals. This approach, in turn, leads to an assumption that an individual, acting alone, can commit an international crime without any state support or involvement, diminishing the international character of these crimes.

The research suggests that policy should be a constituent element, rather than a contextual element, of core international crimes. To this end, the study uses the doctrinal research methodology and examines the existing literature, relevant works by the International Law Commission, and well-established case law in international criminal law. Therefore, the research aims to describe policy as an essential element in core international crimes, by amending their legal definitions to avoid the risk of turning ordinary crimes into "the most serious crimes of concern to the international community as a whole".

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Abdulrahman Hetteh

The Rights of the Ahwazi People in Iran: Historical Claims, Contemporary Reality and Future Prospects

Supervisors: Dr Cathal Doyle, Dr Daphne Demetriou, Dr Elvira Dominguez-Redondo

The paper analyses the conceptual contours of peoples, indigenous peoples and minorities that are relevant to the determination of the rights of the Ahwazi people in Iran. The Ahwazi people are an Arab ethnic group with over five million, constituting eight per cent of Iran's population, living in the south and south-west region, particularly in the three provinces of Khuzestan, Bushehr and Hormozgan. The central government in Iran used military force to occupy Ahwaz territory and ended the self-autonomy rule of the last ruler of Ahwaz, Sheikh Khazal, in 1925. Iran violates the individual and collective rights of the Ahwazis. It denies them their civil and political, economic, social and cultural rights, as demonstrated in the reports of various international organisations, including the UN human rights bodies, making Ahwazis an oppressed and unrepresented people in Iran. Ahwazi people struggle for freedom, justice and the right to self-determination.

This paper argues that the international minority and indigenous peoples' rights frameworks do not fit the needs and aspirations of the Ahwazis in light of their historical claims and current grievances and reality. It outlines the systematic violation of Ahwazi rights, drawing on an analysis of their historical experience and contemporary situation. It provides that the situation of the Ahwazis has deteriorated as their civil, political, economic, social, and cultural rights have been severely violated, suggesting that self-determination under the auspices of international

law is an appropriate lens through which to examine their plight. It argues that the historical Ahwazi territorial claims, coupled with human rights abuses, raise the possibility of categorising the Ahwazis under the banner of oppressed peoples entitled to practice the external dimension of the right to self-determination.

Implementation and application of the right to self-determination of ethnic groups, including the Ahwazi people in Iran, have not been sufficiently studied. The paper's overarching aim is to investigate the extent to which international law and human rights do and could provide a remedy for the Ahwazis, address their historical grievances and claims, improve their contemporary human rights situation, and realise their future aspirations for self-determination.

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Mary A Atito

Black British Men's Perceptions of Therapy: An Afrocentric Constructivist Grounded Theory Study

Supervisors: Dr Elvis Langley, Dr Sofie Bager-Charleson, Rotimi Akinsete, Dr Richard Barry

The construction of a theory that explores Black British Men's Perceptions of Therapy and analyses the implications of these perceptions of therapy for psychotherapeutic, theory, policy, training, and practice.

The focus of this research is inclusive by working in collaboration with marginalised and racialised communities in the UK, hearing their voices, which offer emancipation, liberation, and unity.

Researchers have consistently found that the Black male population is underrepresented in therapy, yet Black men suffer from continued racial stress due to living in a hostile environment and are typically reluctant to seek assistance for emotional or physical problems. This highlights the need for significant understanding in this area, for appropriate therapeutic interventions to be established and targeted.

This qualitative study interviews 10 Black British men and utilises a Constructivist Grounded Theory approach. This method allows researchers to co-construct theory grounded in the data from the realities of participants. Five categories have emerged so far 'being and becoming a Black British man'; 'living with duality'; 'pre-perceptions of therapy'; 'the right encouraging man'; 'a benefiting therapy'. Categories will become subject for exploration in an upcoming set of focus group discussions.

An Afrocentric framework was adopted which centred on peoples of Africa and the African diaspora within their own historical, cultural, and sociological contexts with a foundation on spirituality, based on concepts of agency, centeredness, location, and orientation.

This research suggests that Black men do not voluntarily engage in therapy as it is seen as white and weak, which they do not identify with. Therefore, therapy does not engage Black men and as a result Black men do not engage in therapy. This suggests that Black men would be more likely to engage in therapy, shedding light on factors that may support them to consider and engage in it, which is currently a gap in the literature.

This research presents the opportunity for psychotherapeutic policy, theory, and practice to gain insight into some of the subjective experiences through the voices of Black men when addressing the psychological needs surrounding therapy for the Black community overall.

Keywords: Black Men, Psychotherapy, Afrocentricity, Constructivist Grounded Theory, Community

Nibarna Kannathasan

Mind the Acculturation Gap: Exploring Tamil Families' Experiences in the UK using the Tree of Life

Supervisors: Dr. Nancy Hakim-Dowek

The field of acculturation psychology highlights that families who migrate experience heightened distress between intergenerational family members, this can be further amplified with pre-migratory and post-migratory experiences. The Sri Lankan Tamil diaspora specifically have experienced colonisation, war trauma and genocide to name a few difficult pre-migratory experiences, however there is currently little research exploring the experiences of Sri Lankan Tamil families.

This research responds to the lack of research and the themes of an equal, ethical, inclusive and sustainable future by using the Tree of Life as a research tool. The Tree of Life stems from narrative therapy and was co-developed by Ncazelo Ncube in Southern Africa. It is a culturally inclusive and trauma-informed approach which explores identity from multiple perspectives, such as ancestral roots, grounding, values, hopes and dreams and positive support networks.

Narrative inquiry will be used as a research method to conduct this study which places a focus on storytelling and sharing narratives. Participants are invited as co-researchers to tell their narratives through with a creative approach. The narrative inquiry process involves a focus on finding a narrative, collecting stories, transcription and writing the stories.

The current study aims to conduct the Tree of Life creative workshop with three Tamil families in the United Kingdom who are over eighteen years followed by a semi-structured interview. Each family will be invited to have at least one parent and one adult child and both the workshop and interview will be offered in Tamil and/or English.

Narrative analysis from a family lens will be used to analyse the data following transcription and translation. This will include indwelling, identifying stories, identifying narrative themes and thematic relationships, identifying structures and pulling the analysis together.

The expected contribution to the field of acculturation psychology and narrative therapy is sharing the experiences and exploration of identity of Tamil families in the United Kingdom as there is currently no research examining this phenomenon. By using a creative and inclusive research tool, the Tree of Life, it is endeavoured that dialogue between will be facilitated.

Keywords: acculturation, acculturation gap, Tamil, Tree of Life, narrative inquiry, family

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Anton Ginzburg

Constructed Geographies in Art and Visual Culture

Supervisors: Prof Ergin Cavusoglu, Prof Katy Deepwell

In my trilogy of multimedia projects "Terra Corpus" set in various geographic locations, I am investigating the significance of landscape in visual art. I explore cultural, historical, and speculative aspects of specific sites and places as I experience and record them.

My objective is to evaluate the findings of one chapter of my thesis, "Walking the Sea," which examines the Aral Sea region in Central Asia and documents the ecological disaster that occurred there. While exploring the aftermath of this environmental catastrophe, I observed the tumultuous relationship between nature and the ruins that remained in the landscape. At the Blaffer Art Museum exhibition, my focus was on showcasing the relationship between the desert terrain of Central Asia and the architectural fragments found in the area.

In line with the theme of 'Radically Creative: Research towards an Equal, Ethical, Inclusive and Sustainable Future,' my research on the Aral Sea region in Central Asia is examining the ecological disaster and its aftermath. Through visual art, I strive to provoke thought, inspire dialogue, and foster a deeper understanding of the region's culture, ultimately contributing to a more sustainable and transformative future.

My methodology combines field observations from my visits to the area, exhibitions and lectures, and an in-depth literature review. This approach helps to communicate the story to Western audiences and bring awareness to the topic.

My research explores the difficult-to-reach Eurasian region of Central Asia, situating it in an art historical context and incorporating it into academic discussions. By combining factual and fictional elements through temporal layering, I created new narratives that expanded the understanding of these locations and histories. And it allowed me to identify research outcomes as theoretical acts and situate their relevance within cultural and educational frameworks.

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Ruth D Gyereh

A Novel Bioactive Peptide, QUB-2392 Induces Apoptosis on Human Acute Myeloid Leukaemia Cell line, Kasumi-1

Co-authors: Dr Zhanzhong Shi, Dr Song Wen, Dr Dong Li, Prof Ajit Shah

Therapeutic prospects of bioactive peptides (BAPs) transitioning to anticancer agents appear as a fertile ground requiring further investigations. The mechanism of action of BAPs appears heterogeneous, including membrane disruption and apoptosis induction.

QUB-2392, a novel BAP isolated from amphibian skin secretions, has shown potential in vitro cell growth inhibitory activity in different human leukaemia cell lines. This study investigated the cytotoxic effect of QUB-2392 on cell proliferation and the underlying mechanism of action.

Acute myeloid leukemia (AML) cell line, Kasumi-1, was used in this study at 24- and 48-hour time points. MTS cell proliferation assay was used to evaluate the cytotoxic effect of the peptide. Techniques applied to illustrate the underlying mechanisms include Western blotting and real-time quantitative RT-PCR (QPCR) to investigate the alteration of the expression of certain proteins and genes. Apoptotic activity and cell cycle analysis were determined by flow cytometry and TUNEL assay, and proteomics by Mass spectrometry was used to further investigate proteins with altered expression.

The MTS assay revealed a cytotoxic activity evidenced by cell growth inhibition and a reduction in cell viability. The IC50 value used was 14.3 µInduction of apoptosis using Annexin-V-FITC was evident in the leukemia cells with no significant cytotoxicity on normal lymphocytes. Cell cycle analysis showed cell growth arrest mostly at the G2/M and S phases. DNA fragmentation was shown at the sub-growth (G0) phase, suggestive of apoptotic activity. Further apoptotic activity was confirmed by TUNEL assay, which demonstrated distortion of cell morphology evidenced by

chromatin condensation. Western blotting analysis revealed downregulation of anti-apoptotic proteins, MCL-1 and BCL-2, consistent with the downregulation of their expression at mRNA levels as detected by real-time quantitative RT-PCR. Furthermore, proteomic studies by mass spectrometry showed upregulation of pro-apoptotic proteins such as apoptosis-inducing factor (AIF), cell cycle and apoptosis regulator-2 protein (CCAR2), apoptotic chromatin condensation inducer 1 (ACIN1), and cytochrome-c, while downregulating anti-apoptotic proteins such as apoptosis inhibitor and BCL-2 proteins.

This present study demonstrates the in-vitro anti-leukaemic potential of the novel peptide, QUB-2392, against AML cells, suggesting that QUB-2392 could be potentially modified as an anti-leukaemic agent.

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Stephen Orwin

Developing a prescriptive exercise plan for people over 65 with Parkinson's in Care Home Facilities

Co-authors: Dr Tim Evans, Dr Rhonda Cohen, Dr Anne Elliot

The purpose of this study is to develop a physical activity prescription to enhance the lives of people living with later-stage Parkinson's disease in health and social care facilities.

It is equal and inclusive as anyone in the general ageing public is at risk of this disease. It is a condition that doesn't discriminate to any gender or ethnicity.

According to the Parkinson's UK website, there are around 127,000 people in the UK living with Parkinson's. Of those, around 10,000 are living in care homes. At present there is a lack of research supporting a specific exercise prescription.

This research will aim to formulate a prescription for physical activity targeted towards individuals who have been diagnosed with Parkinson's in a health and social care setting using action research.

This research will help to improve the quality of life for people living with Parkinson's in care homes by supporting their physical and mental health, which are essential for people with this condition.

This research's methodology will be using Action Research. Action research is a methodology that involves a process of planning, action, observation, and reflection to bring about positive change in a particular context or situation. In this context, this will aim to prescribe individuals living with Parkinson's in a more appropriate and beneficial way.

In healthcare, action research can provide several benefits, including: Improving patient outcomes, enhancing the current practitioner knowledge, encouraging innovation and creativity, enhancing the healthcare culture and to engage with the people that are cared for in a more long-term setting.

The intervention will follow an exercise protocol for the participants and then the physical markers set by the researcher will be analysed and then the results will be examined in depth.

This contribution is expected to make a difference in the way exercise is prescribed in a health and social care setting due to the nature of the exercises based on current research and findings. When this research is concluded the hope is that this research will be used as a prescriptive form of therapy by qualified professionals for people living with Parkinson's disease. It will also act as a framework for public and private health and social care settings to help aide with pharmaceutical needs and act as a consultancy piece.

The results are expected to contribute to prescribing exercise for a particular population (Parkinson's disease) and if the results are shown to be effective that is when the protocol will then be promoted and shared with other professionals.

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Neha N Nathaniel

Development of antibody-based Biosensors for the Detection of Visinin-like Protein 1 as an Investigative Device for Monitoring Alzheimer's Disease Progression

Co-authors: Richard Bayford, Ajit Shah and Sandra Appiah

According to the World Health Organisation, there are currently 50 million Alzheimer's Disease (AD) patients worldwide and this figure is expected to triple by the year 2050 due to the lack of disease treatment. The overlap of AD and other dementia biological markers has limited the differential diagnosis of AD despite the rapid technological advancements in the field of diagnostics. Electrochemical biosensors have emerged as a fast and cost-effective technique for disease diagnosis with good sensitivity and specificity. The overall aim of the PhD study is to construct and optimise a tetra polar gold microband impedimetric biosensor based on electrochemical impedance spectroscopy to detect and monitor Visinin-like protein 1 (VILIP-1), a novel protein for AD diagnosis.

A biosensor was constructed with the layers of the self-assembled monolayer, protein G, immobilised antibody and the antigen (a biomarker of interest) on the gold electrode to form a stable complex for higher measurable impedance. Impedance changes were measured using a Solartron 1260 analyser with SMaRT software. Enzyme-linked immunoassay (ELISA) and Western blotting were employed to validate the biosensor results. Pre-coated ELISA kits were used to measure VILIP-1 (at 450 nm absorbance) in human cerebrospinal fluid (CSF) samples and spiked samples. The traditional biomarker for AD, tau protein (at 540 nm a fluorescence), was also measured in CSF as the control sample.

The biosensor detected the presence of the target protein at a concentration of 1 pg/mL in foetal bovine serum (FBS). Results from Western blot analysis showed VILIP-1 and tau at 22 kDa and 63 kDa, respectively. The lowest concentrations of tau detected were $4.6X10^4$ pg/mL (n=3), whereas for VILIP-1 (n=2) it was about 5-fold higher. From the ELISA assay, VILIP-1 in CSF samples ranged from 22.9 ± 1.80 pg/mL to 35.6 ± 4.60 pg/mL (n=3). Two CSF samples spiked with 10 pg/mL of tau protein showed a ratio of 0.61 and 0.23. However, VILIP-1 in CSF samples reported in the literature using ELISA ranged from 72.1 ± 21.2 pg/mL to 568 ± 61 pg/mL, indicating the validation with ELISA is sufficiently sensitive while the Western blotting measured much higher levels than that detected by the biosensor.

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Michael O'Driscoll

UK newspaper 'framing' of privatisation in the NHS

Supervisors: Prof Betsy Thom, Dr Tim Weaver, Dr Sophie Knowles

The research presents very preliminary findings from content analysis of large circulation UK national newspapers (2010 to the present), analysing coverage of privatisation in the NHS, particularly at periods of major legislative change or 'crisis' in relation to the NHS, including the covid pandemic.

The methodology draws on a combination of thematic analysis pioneered by the Glasgow Media Group as well as 'framing analysis' and quantitative coding of newspaper articles on selected key (e.g. political affiliation/ ownership of newspaper, length of article, positive / negative attitudes to privatisation) .

Emerging findings suggest that NHS privatisation is not often reported on in national newspapers, even when major reforms have been enacted in legislation (e.g. integrated care systems which many believe are likely to increase private sector involvement). The various forms of privatisation and their extent are rarely explored. NHS privatisation tends to be seen as unproblematic by most newspapers despite the fact that survey research continues to show opposition to privatisation in the NHS. There has been relatively little exploration of what the public or health professionals actually understand by the term privatisation in relation to the NHS (e.g. the term is commonly associated with paying for healthcare or healthcare insurance but privatisation does not necessarily entail charging and can take a wide variety of forms , most commonly private provision of services paid for by the NHS, free at the point of use and often under the NHS 'Brand'). Many forms of NHS privatisation are little known or discussed in the media (e.g. data sharing with the private sector for various purposes including 'predictive diagnostics', trying to determine which individuals or population or most likely to develop certain illnesses or diseases, or residential mental health services which are almost entirely run by private providers).

The fact that there is little newspaper coverage of NHS privatisation and that it is often seen as non-problematic or beneficial may be an important factor in explaining why public awareness or understanding of NHS privatisation is low and that may weaken public resistance to government policies which increase NHS privatisation.

Keywords: NHS, healthcare, media, privatisation, new public management

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Denisha Seedoyal-Seereekissoon

An investigation of the use of positive versus negative message framing, moderated by gender, on charity donation: a study in the context of anti-domestic violence campaign in Mauritius

Supervisors: Dr Simon Manyiwa, Dr Zhongqi Jin, Dr Athina Dilmperi

Over the last decade, the increasing number of charities resulted in a rise of competition for charity funds, including those fighting against causes like domestic violence. Recent studies focused mostly on how anti-domestic violence advertising campaigns encouraged other pro-social behaviours (such as changing behaviour or intention to help) instead of donation. Moreover, within advertising literature, it was noted that there is an ongoing debate on the efficacy of positive versus negative message framing. As per the prospect theory (Kanheman and Tversky, 1979), advertisements that illustrate positively (i.e. showing gains) and negatively (i.e. losses) message frame forecast equivalent outcomes. However, there is no study to date that proved which one among negative (i.e. disgust) versus positive (i.e. hope) message frame is more effective in encouraging audiences to donate. The other aspect of literature emphasised on how the portrayal of gender (i.e. male versus female) of victims influenced the relationship between message framing and donation. Therefore, the research aim is to determine the impact(s) of using positive versus negative message framing, moderated by gender of victims, on actual donation behaviours, in the context of anti-domestic violence campaigns. The chosen methodology is a 2 (disgust: low/high) x 2 (hope: low/high) between-subject experiment design to test the effects of message framing (i.e. disgust versus hope) on donation behaviour. 384 diverse respondents will be split into a control and experimental group randomly to increase the validity of the study. Within the control group, participants will indicate their donating behaviours towards charities. On the other hand, the experimental group will be exposed to four types of advertisements and will be expected to select the one influencing them to donate. This research is expected to bring light to the ongoing

debate about the effectiveness of negative versus positive advertising messages on donating behaviours. Moreover, charities will benefit from a clearer understanding of how they can creatively and effectively communicate to potential donors while designing advertisements. Consequently, charities can acquire more resources, with the increased donations, to pursue their prevention campaigns and making a positive and sustainable impact within society, as aligned to the theme of this conference.

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Keywords: charitable advertising, message framing, donating behaviours, gender, social sustainability

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Qiong Yuan

The impact of artificial intelligence focus on firm performance: the role of R&D, marketing expenditure, top manager education level

Supervisors: Dr Zhongqi Jin, Dr Helen Cai, Prof Charles Dennis

In this study, we examine the links between three dimensions of companies' focus on AI and their firm performance: financial performance, operational efficiency and market performance. In addition, we examine the potential mediating role research and development (R&D) staff ratio, R&D investment and marketing expenditure in this relationship, and propose research hypotheses. Besides, the study focuses on evaluating top manager education level (EDU) as a moderating variable to study the mechanism of AI focus and in the overall firm performance. This study is the first to conceptualise AI focus, its antecedents, mediators, moderators, and consequences (based on firm performance). We also advance the theory by proposing a new framework that elucidates the relationship between AI focus and firm performance through a quadrilateral infrastructure resource-based view theory, cost theory, talent management theory and organisational learning theory. Finally, this study makes a clear understanding of AI focus, which can support companies that are more likely to increase corporate AI focus through EDU, R&D investment, R&D staff ratio and marketing expenditure. The process begins with a qualitative review of the existing literature. Next, an exploration phase will be started, and the word frequency of AI Focus-related keywords in the annual report will be counted as the degree of company AI focus for preliminary data collection on this subject area. The model will then be tested by incorporating financial data on Chinese listed companies from

2007 to 2021. This study will focus on Chinese publicly listed companies from 2007 to 2021, and draws empirical conclusions. The annual reports of these companies will be the major source of data. Panel data analysis will be used to implement the study.

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Leanne Myers

"It's only watching it back that I can think differently about what's happening". What can 'Interpersonal Process Recall' offer to reflective practice when working with offenders with 'Personality Disorder'?

Supervisor: Dr Maxine Daniels

Offenders with 'Personality Disorder' (PD) present serious challenges to probation and health services. Many have experienced traumatic events in childhood, including abuse and neglect, all which can have a profound impact on the ability to feel safe in relationships.

The Offender 'Personality Disorder' (OPD) strategy involves health and justice professionals working in partnership to provide a pathway of psychologically informed services to reduce reoffending and protect the public from harm.

A qualitative study seeking to understand the process of inter-disciplinary psychological consultation within the OPD Pathway used the guided reflective interview method, 'Interpersonal Process Recall' (IPR).

5 pairs comprising a psychologist-consultant and a probation officer-consultee, working in tandem, participated in the study. A consultation between the two was observed. Next, a 1:1 interview using IPR involved watching the recorded consultation together, pausing at points to talk about spoken and unspoken thoughts, feelings, perceptions, and bodily sensations as felt at the time of the original interaction. Observation and interview data was analysed using Thematic Analysis.

Although not a specification at the outset of the study, participants commented on the usefulness of IPR as a way of increasing reflective capacity.

Findings from the study and the use of IPR offers insight into how IPR might be used to enhance reflective practice by:

a) Thinking about complex, out of awareness, relational dynamics from multiple experiential angles; enhancing capacity to make sense of 'damaged' minds.
b) Increasing capacity to think about both public protection and client's needs. This is essential as holding compassion for a person's distress can be challenging when simultaneously feeling afraid, helpless, frustrated, and attacked.
c) Confidence, empowerment, and self-directed compassion by watching one's own process of *working out* and *working through*.

It is hoped that this study can invite dialogue about reflective practice and ways of working with this much maligned and stigmatised group. There are wider implications for helping develop compassionate, ethical, and inclusive practices within the Criminal Justice System.

Malcolm P Bevan

The impact of floods on the professional wellbeing of emergency first responders (EFRs)

Supervisors: Dr Sally Priest, Dr Ruth Plume, Prof Emma Wilson

Recently, the United Kingdom has seen an increase in flood events, resulting in significant losses and a need for mitigation efforts from Emergency First Responders (EFRs). The Environment Agency (EA) plays a crucial role in these interventions by coordinating efforts with other EFRs and providing emergency services where needed. However, through the nature of their professions, EFRs, including Incident Responders at the EA, are frequently exposed to crisis situations, often with a significant toll on their physical and mental health. In other EFR organisations, these effects have led to high turnover rates and consistent staff shortages across various domains.

As flood events continue to increase, the EA needs radical creative approaches to preserve the professional wellbeing of its EFRs. In light of these concerns, the current research, conducted in partnership with the EA, seeks to determine how flood events impact the professional wellbeing of incident responders, and thus enable the EA to develop new innovative and creative strategies for its workforce.

As part of this research, a systematic literature review (Bevan et al., 2022) investigation was carried out to analyse the knowledge base on EFR wellbeing. This investigation revealed that factors contributing to a decline in professional wellbeing emerge from within the organisational environment, rather than from the event itself. These findings highlight the importance that organisational policy and leadership can have on maintaining a healthy workforce and guide future research efforts into assessing how the EA is currently organising, leading, and managing its workforce during flood events.

The results of this research will have implications for the development of innovative policies and practices that will better support EFR organisations in maintaining a healthy workforce. This information, combined with current resources and approaches, are regarded as the foundation of radical innovative strategies to address current professional wellbeing in emergency response, not only for the EA, but also for other EFR organisations. This research thus aims to provide groundwork for EFR organisations to develop better approaches for supporting EFRs and helping them to cope better with the demands of their work, ultimately leading to a more resilient workforce.

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Keywords: emergency first responders; professional wellbeing; organisational culture; leadership; team building; welfare.

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Daniela Paternina Martinez[1]

Osteoclasts and mesenchymal stromal cells release factors that modulate migratory body formation in highly metastatic osteosarcoma cells

Co-authors: Scott J. Roberts[2], Helen C. Roberts[1]

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Metastatic disease is one of the major factors affecting osteosarcoma (OS) prognosis. Survival rate of metastatic patients is 20% to 30% compared to up to 80% in nonmetastatic patients. Recent evidence shows that loss of osteoclasts (OCs) by zoledronic acid (ZA) is associated with lung metastasis.

Through our model of OS metastasis *in vitro*, we have found that in the highly metastatic OS cell line HOS-143B, there is a subpopulation of cells that are highly migratory and have enhanced expression of stemness and metastasis-related genes such as Oct3/4, Nanog, CXCR4 and RUNX2 - we have termed these cells migratory bodies (MBs).

Moreover, preliminary evidence gathered by our group indicates that mesenchymal stromal cells (MSCs) are able to suppress MB formation *in vitro* (unpublished). We have also differentiated peripheral blood mononuclear cells (PBMCS) into OCs in the absence of stromal cells *in vitro,* and have used our *in vitro* assay of metastasis to assess the effect of OC- and MSC-released factors on MB formation.

Here, we show a significant reduction in MB formation in HOS-143B cells cultured with OC (52%; ($p \leq 0.001$)), and MSC conditioned media (37%; ($p \leq 0.001$)) compared to controls. The data showed a reduction (39%; ($p \leq 0.001$)) in MB formation in HOS-143B cells cultured with OC conditioned media, compared to HOS-143B cells cultured with conditioned media from OCs treated with ZA.

Together, the data suggests that both OCs and MSCs release factors that reduce MB formation in highly metastatic OS HOS-143B cells. This supports our hypothesis that bone cells, namely OCs and MSCs, release factors that may contribute to the maintenance of OS cells within the bone microenvironment. We therefo hypothesise that secretion of 'tumour maintenance factors' by OCs and MSCs suppress metastasis.

Keywords: osteosarcoma, metastasis, bone cells.

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Adesola Akindejoye-Adesioye

Systemic societal vulnerability to coastal flooding: A case study of Eti-osa, Lagos Nigeria

Supervisors: Dr Christophe Viavattene, Dr Sally Priest, Prof David Windridge

Coastal communities are vulnerable to flooding due to a range of factors including urbanization, population growth, and extreme weather events. The degree of vulnerability within such communities is determined by their intrinsic characteristics and their capacity to adapt to flood events. Whilst many studies have delved into the conventional determinants of flood vulnerability such as physical, social, and economic dimensions, and a few have explored the psychological aspect, the bulk of this literature is concentrated on developed nations. However, in developing countries, particularly in coastal areas where slums, and affluent neighbourhoods exist in proximity, there is a paucity of knowledge on vulnerability indicators and how these intersect. Therefore, the study aims to compare and rank the vulnerabilities of coastal communities at the block level using an indicator-based approach, which can serve as a comprehensive tool for promoting sustainable development and enhancing community resilience to flooding. We propose a novel approach for the quantification of vulnerability, diverging from the traditional

methods commonly utilized in the field. This innovative approach seeks to advance our understanding of the multifaceted nature of vulnerability and its determinants within a Nigerian context, while simultaneously expanding the conceptual and methodological horizons of vulnerability research. We will explore proxies for biophysical, social, critical infrastructure and services as a determinant and outcomes of vulnerability through the existing dataset, household survey and key informant interviews conducted in Eti-Osa Local Government Area. A purposive sampling technique is used to collect primary data from 1,117 households and 20 key informants' interviews for the pilot study. The preliminary survey and interviews conducted in Eti-Osa will be leveraged to ascertain the vulnerability of the selected wards, and the lessons gleaned will be documented and disseminated. It is anticipated outcomes of this study will give a deeper insight into the factors contributing to the vulnerability of the pilot communities, which can serve as a valuable resource for guiding future research endeavours.

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David Booth

Quality by Design: An Improved Product Development Framework for Designing Reliable Medical Device Emergency-Use Auto Injectors

Supervisors: Dr Richard Bayford, Dr Andrew Tizzard

Nerve agent antidote autoinjectors are designed and function as first line of defense medical treatment for service members following exposure during a chemical attack. As such, these life-saving devices, designed for automatic self or buddy-administration, need to have a high level of reliability to provide the necessary protection for service members. The U.S. Food and Drug Administration (FDA) requires these emergency use devices to have an overall reliability of 99.999 percent, with a confidence level of 95 percent. At this reliability level, approximately 1 defect out of 100,000 manufacturing opportunities can be observed. How can this high level of reliability be effectively designed in, and sustained through manufacturing processes?

Companies are concerned with how much additional time and cost will be incurred to meet these new reliability requirements. Manufacturers successfully attaining this level of performance are leveraging device and manufacturing process design methodologies in this improved development framework allowing them to reduce the time and cost to realize a more reliable product. This framework integrates design-outcome predictive approaches such as Design for Six Sigma and Systems Engineering to produce a design that eliminates product failures before they happen and has the overall effect of increasing the device reliability.

This research investigates a design framework and associated methods capability to determine if it can help the product development teams reduce the time and cost to realize a more reliable product. Currently, the U.S. Government is partnering with two separate manufacturer's design teams in implementing this new framework. A research study has been prepared and is being conducted that is producing improvement in device reliability saving project time and cost. Two other project teams and their development results serve as controls.

To date, the two teams using the new framework have successfully met the FDA's reliability requirements. After each team was trained to the point where they could effectively use the new framework and methods, it took them between one to 1.2 years to reach their reliability targets. The control teams did not reach their reliability targets after 13 and 2.5 years respectively and the projects were ended.

Keywords: medical device design, quality by design, medical device reliability

Tricia McQuarrie

Translating research into practice: an investigation into the translation, adaption and implementation of Contingency Management into drug and alcohol treatment services in England

Co-Authors: Tim Weaver and Nicola Metrebian

Intro: The problematic use of drugs and alcohol (D&A) is a major public health priority. Evidence-based interventions (EBIs) exist to treat problematic D&A use however their implementation is often slow and complex, affecting the quality of treatments offered to services users. One effective intervention which has a strong evidence-base and is recommended in multiple clinical guidelines is Contingency Management (CM). CM involves providing a 'reward' (in the form of vouchers and verbal praise) to encourage behaviours which align with personal recovery (attending an appointment, medication adherence and abstinence).

Aims: To explore the practical challenges associated with the implementation of CM in D&A treatment services in England. Objectives include: a) To determine the rates of use, characteristics and quality of CM programmes being implemented b) to assess how CM programmes have been adapted, translated and implemented into routine clinical practice c) To assess practitioner, commissioner and service user perspectives on the utility, effectiveness and feasibility of implementing CM in D&A services d) To assess the opportunities and scope for innovation and adaptation of evidence based CM interventions for wider implementation in D&A services.

Methods: Drawing on theories and frameworks from the field of Implementation Science, specifically the Context and Implementation of Complex Interventions framework, a multiple level, mixed-method research design will be adopted including: (1) a national survey of D&A providers to assess the rates of CM implementation; (2) a case study investigation in multiple D&A sites comprising of interviews and focus groups with professionals and service users; (3) interviews with commissioners exploring their views on implementing CM and other EBIs in the Addictions.

Impact: This PhD will identify the barriers and facilitators to the successful implementation of CM and produce essential evidence for further implementation studies in the D&A field. Findings will influence future research on how to increase the uptake of EBIs in the Addictions and optimise the implementation process. This will advance the scientific study of addiction and its treatment, and provide the basis for further work designed to affect positive change in service delivery, workforce development and the quality of treatments offered to people living with addiction.

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Farah Ahmed

An assessment of current political tensions and challenges in the Horn of Africa, specifically in Ethiopia, Djibouti, Somalia, and Somaliland as a result of ongoing efforts by both the US and China to consolidate and extend regional dominance

Supervisor: Dr Peter Hough

This paper provides an in-depth analysis of the ongoing geopolitical competition between the US and China in the Horn of Africa, focusing on Ethiopia, Djibouti, Somalia, and Somaliland. The ongoing efforts by both countries to extend their regional dominance have resulted in increased political tensions, which pose a significant threat to the stability of the region.

Drawing on contemporary realist theories such as power transition theory, the philosophy of power competition, coalitions and bandwagon theory, the paper explores the security and economic implications of this power struggle,

as well as its potential long-term future impact of inclusivity and suitability future of the Horn of Africa. Consideration will also be given to the historical and cultural factors that have shaped the current political situation in the Horn of Africa.

The research will draw on primary quantitative data, with the study utilizing interview questionnaires with high-ranking government officials, politicians, and academics from the four countries. Secondary data will be obtained from textbooks, academic journals, and the internet. These methods were combined and will be the most efficient in embarking upon this research.

In conclusion, the paper highlights the need for a nuanced understanding of the complex political landscape in the Horn of Africa and recommends a multi-faceted approach to addressing the challenges and tensions facing the region. It also proposes several solutions to these primary concerns.

Keywords: Horn of Africa, inclusivity and suitability future, realism, geopolitical tensions, bandwagon theory.

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Jibril Salifu

Value Co-Creation Approaches to Place Branding: The Role Of Digital Engagement

Supervisors: Dr Giannina Warren, Dr James Graham

Place branding has become a crucial strategy for enhancing the competitiveness and attractiveness of cities and regions in today's globalized world. A growing body of literature emphasizes the need for co-creating value in place branding efforts by involving various stakeholders, including residents, businesses, tourists, and other local actors.

Value co-creation approaches can promote inclusivity and participations in place branding initiatives and activities. This involves investigating how digital engagement can help to overcome barriers to participation and how different stakeholders including local communities, businesses, government entities, and other relevant actors can be empowered in place branding initiatives. However, there is limited research on how value co-creation approaches, which emphasize collaboration and engagement, can be effectively employed in the context of place branding, particularly in developing countries such as Ghana. With the rapid advancement of digital technologies, digital engagement has emerged as a crucial aspect of place branding efforts. Moreover, with the rapid proliferation of digital technologies, digital engagement has emerged as a key enabler in place branding initiatives.

This study aims to explore the role of digital engagement on value co-creation approaches for place branding with a focus on Ghana. Integrating the DART Model by Prahalad and Ramaswamy (2004) and Grönroos-Voima (2013) provides a theoretical framework to guide the study. Also, the study will involve a mixed-methods approach that combines both qualitative and quantitative research techniques.

This research will contribute to literature on value co-creation, place branding and digital marketing by providing knowledge on how these concepts can be coordinated in the creating an inclusive, ethical and sustainable approach to place branding. Furthermore, policy makers, destination marketing officers and all who work in the ecosystem of place branding can comprehend how to use digital platforms for place branding activities.

Keywords: Value co-creation || Place branding || Digital Media || Place identity || Economic growth

Stephen E Agada

Ushering the Virtual Age: Understanding the factors influencing the adoption of Virtual Reality Shopping applications among Generation Y and Generation Z

Supervisors: Prof George Dafoulas, Dr Harjinder Rahanu, Joanna Loveday

Though we have seen the use of immersive technology in various industries such as marketing, tourism, and gaming in recent years, the practical application of these technologies in e-commerce has been more augmented than virtual, despite statistics showing that, 70% of consumers aged between 19-49 (in the generational brackets of Y and Z) are interested in VR technologies. However almost no literature exists on the adoption of Virtual reality shopping application (VRSA) technologies especially among the afore-mentioned age group, who are also today's largest consumers of information technology goods and services, hence prompting the decision for this study, to understand why VR as an immersive technology is not as widely used as it's counterpart AR in the ecommerce industry, and what needs to be done for VR to display its promising capabilities in the ecommerce industry. This study utilized a systematic review of literature method to identify the possible factors which could influence the rollout and adoption of VRSA by businesses and online shoppers respectively, based on the based on the unified theory of acceptance and use of technology (UTAUT). The findings of the review identified seven variables: Business Factors, Product Type, Social Factors, Technology Factors, usability Factors, Consumer's perception of VRSA and Business Perception of VRSA, and proposes thirteen hypotheses centered around the relationships between the identified Variables. By combining the identified variables, proposed hypothesis and the UTAUT model, this study also proposes a conceptual model to map an explicit view of the relationship(s) between the identified constructs, In order to determine how the identified constructs influences VRSA adoption by both businesses and consumers, and also create a design of VRSA, based on the identified constructs and proposed hypothesis, to aid in investigating the validity of the identified constructs and proposed hypothesis towards VRSA adoption, by utilising the positivism research philosophical perspective, and a mixed method complex research type. Both quantitative and qualitative data will be collected using the mixed strategies, after a series of user testing involving the developed VRSA prototype, aiming to give the research participants experience with the technology, before participating in the data collection process.

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Stephen J Hall

A taxonomy of Knowledge Management in Micro and Small Enterprise

Supervisors: Dr Serengul Smith, Dr Can Baskent, Dr Clifford De Raffaele

Knowledge Management Systems increase operational efficiency, improve decision-making, and enhance innovation in business organisations. However, the overheads required to maintain such systems exclude the smallest of firms from realising these benefits. This paper aims to identify, evaluate, and summarize the research distribution that exists on knowledge management and supporting systems across the micro and small business size classifications. It also seeks to establish if existing knowledge management systems, practices, and models cater to these enterprise sizes' limited resources. It contributes new insight into the applicability of knowledge management systems and stimulates a possible re-think of how such systems can cater for the specific constraints of this prolific business type. This taxonomy is based on a thorough analysis of 168 research papers from a total of 10511 papers published in reputable conference proceedings over the past ten years. The research is divided into two main phases. The first extracts candidate papers by presenting a series of exclusion filters that are applied to the advanced search facilities of the selected databases. The second phase yields the taxonomy by applying an

adaptation of the Nickerson et al., (2013) seven-stage analysis approach to these papers. The research focuses on key knowledge management themes, including the size of the enterprise, the adoption challenges, the potential benefits, the technologies used, and the aspects of the knowledge management cycle that are being employed. Furthermore, it draws on this analysis to highlight the appropriateness of existing knowledge management systems to the distinctive risk and opportunity characteristics of micro and small enterprises. The taxonomy underlines current knowledge management research for this size of enterprise and establishes the lack of consideration for micro-enterprise in existing designs.

Keywords: Taxonomy, Knowledge Management, KM Cycle, KM Adoption Challenges, Micro Small and Medium Sized Enterprise

References: Nickerson, R. C., Varshney, U., & Muntermann, J. (2013). A method for taxonomy development and its application in information systems. European Journal of Information Systems, 22(3), 336–359. https://doi.org/10.1057/ejis.2012.26

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Faten Alzazah

Fake news detection and removal for more trusted market prediction based on the Sentiment of News and TSI via deep learning models

Supervisors: Dr Xiaochun Cheng, Prof Xiaohong Gao

Forecasting changes in the stock market has long been appealing to researchers. Conventional information like the price of stocks, posts, and economic text news is simply insufficient today because they don't present a whole picture. Some of those reactions might not be positive. Before you can decide on what to do, you must completely comprehend what they are expressing. With the help of the Grid search optimization technique with the model's NB, LSTM, ATT-LSTM, and deep transformers, we will analyze the sentiment of the S&P 500 stock using several different approaches. This work stands out because it uses the Rabin-Karp algorithm to identify fraudulent text news stories, after which it removes them from our collection of text news. Then, to foresee changes in the stock market, we will combine more reliable text news articles with video news and the previous prices.

After filtering the fake news we will use the Granger causality test to evaluate the robustness of the causal connection between share prices, and the more trusted text news sentiment. Several models for sentiment analysis of S&P 500 stocks were initially assessed using LR, SVM, LSTM, ATT-LSTM, and CNN models with our video news dataset.

This study is distinctive because it will compare the use of financial video news stories compared with the use of the more trusted text news stories to forecast the stock market movements. The preliminary experimental findings indicate that, in comparison to typical text news views, there is a higher causal relationship between video news mood and stock market volatility. The reason is that the text news may contain more fake content and by removing fake news we will be able to predict market moments more accurately based on text news and video news combined.

By using the Rabin-Karp algorithm to search our dataset for phrases that indicate fake news, such as bias, Clickbait, and parody words, we will ultimately employ more reliable text news. The accuracy of our deep learning models will therefore rise as a consequence of the removal of doubtful news from our dataset. Hyperparameter optimization methods such as Bayes Grid Search are used to choose an appropriate collection of hyperparameters

to develop a more reliable DL model. To determine the direction of changes in the S&P 500 stock, we will ultimately combine.

Reliable text news, video news, and stock previous prices. Finally, we will evaluate our dataset and findings against another research.

Keywords: Fake news detection, market prediction, reliable news, deep learning, Rabin- Karp algorithm, Bayes Grid Search

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Cephas Mpungu

Enhanced Digital Forensics Readiness and Intelligence-lead Investigations in Big Data Wireless Medical Networks

Supervisors: Dr Carlisle George, Dr Glenford Mapp

Security incidents, technological advancements, mHealth (mobile health) devices, and disparate amounts of data (big data) within healthcare are increasing daily. The aforementioned coupled with the sensitivity of healthcare data, data protection requirements, and big data management complexities, have intensified the need for Digital Forensics Readiness (DFR) within wireless medical networks. DFR is a proactive approach undertaken by organisations towards the collection of potential evidential data to simplify digital forensics investigations (DFIs) and support business continuity in case of an incident. DFIs are sanctioned to solve data healthcare breaches (external and internal), network failures, medical malpractices, and fraud investigations amongst others. However, the large amounts of structured, semi-structured and unstructured data generated by wireless medical networks pose several challenges in terms of volume, storage, variety, privacy and methodological approach during investigations. This research proposes a decentralised big data framework to address these challenges. This framework facilitates the collection, decentralised storage, processing and analysis of potential evidential data (e.g. Electronic Healthcare Records (EHRs), email, claims data, administrative data, network-related logs and imaging reports) using Hadoop. The framework is configured on a private cloud and accessed through a blockchain authenticator. It incorporates an Intelligent Digital Forensics Investigation Assistant (IDFIA) to aid investigations using machine learning. The IDFIA is designed to provide real-time assistance to investigators such as giving guidance on forensic analysis techniques and suggesting potential leads or possibilities for further investigation. The IDFIA is trained using a combination of supervised learning and reinforcement learning utilising datasets derived from healthcare big data and other sources such as Digital Corpora and relevant legislation. The IDFIA could become increasingly sophisticated over time, adapting to the needs of individual investigators and healthcare environments. Additionally, this would also streamline investigation workflows, automate routine tasks, and reduce the risk of human error. Evaluation of the framework is done using a standards-based and scenario-based evaluation.

Kajal Mistry

With Creative Eyes Towards the Future: Using Counterfactual thinking to assess student behaviours

Co-author: Prof George Dafoulas

People frequently encounter instances of counterfactual thinking in everyday-life situation allowing people to rethink and reflect previous events. Such thoughts are best explained in terms of their role in behaviour regulation and performance improvement. Throughout this research the focus will be developing and filling the gap within counterfactual thinking, human behaviours, and educational technologies. The purpose of this research is to see the reasonings and predictions behind the decisions of students own learning and their goals in education. The main advantage of using human behaviours allows researchers to gain understanding of motivations, productivity and how teams and individual's work. Furthermore, as human behaviour is difficult to understand, perceptions of human beings' behaviours tend to change from time to time with dependencies such as personality, attitudes, values, perception, motives, and abilities.

The study includes a cross-field investigation which spans across the following areas and will be detailed within the thesis: (i) Emotion (ii) Cognitive capabilities (Human Behaviour), (iii) Counterfactual Thinking and (iv) Educational technologies. By covering these aspects and focuses, a review of the developing gap can be seen in detail. The expected results from this research is: to provide a consideration on the factors that would hinder human behaviour, to provide an insight of counterfactual thinking in general and in higher education, to provide a report and analysis on how counterfactual thinking can help promote learning and better for student performance and to provide students with their learning styles and personality traits and the links with how they perceive data for decision making.

This research study is aligned to the conference theme of "Radically Creative: Research for an Equal, Ethical, Inclusive and Sustainable Future". The focus of this research is on the use of eye tracking devices as creative means for technology assisted learning using behavioural patterns in human computer interaction. Eye trackers provide an innovative way to assess user interaction and perception of online content, which can enhance decision-making in assessment, learning, and teaching. By creating content heatmaps the technology can enable educators to determine user behaviours, cluster interaction patterns with online learning material and possibly generate predictive analytics for different learner types.

Aim: The aim of my research is to investigate patterns between certain cognitive abilities and the ability of students to accurately predict or reflect on their assessment results, with the use of cognitive abilities using the Myers–Briggs Type Indicator and VARK learning styles results with eye movements, facial and emotional expressions.

Keywords: Counterfactual Thoughts, Personal Expectations, Emotion, Eye tracking, Behavioural Patterns, Human Behaviours and Educational Technology.

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Sailendra Ramanna

EEG Signal processing using Dynamic Mode Decomposition and 1DLocal Binary Patterns

Co-authors: Dr Santosh Tirunagari, Prof David Windridge

Alzheimer's Disease (AD) is one of the most prevalent brain disorders amongst the elderly population. AD should be diagnosed as early as possible in order limit its degenerative spread. We present a novel pipeline for detecting

Alzheimer's utilizing Constrained Dynamic Mode Decomposition (DMD) as a feature extractor with Local Binary Patterns (LBP) as the feature selector. We experimentally confirm that constrained DMD fits the oscillatory model describing the synchronization of cerebral signals even with small amounts of data. A Support Vector Machine (SVM) is then applied to determine the classification performance. We evaluate the performance of the proposed pipeline on standard benchmark datasets, comparing results against the hitherto state-of-the-art approach of Singular Spectrum Analysis (SSA), finding an improvement of 3% F-measure accuracy against the comparable state-of-the-art of 1D-LBP signal representation.

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Adetunji Ademola

Preserving privacy when implementing interoperability of Electronic Health Records

Supervisor: Prof George Dafoulas

Technology can play a significant role in addressing some of the privacy challenges associated with the implementation of interoperability of EHRs. Interoperability refers to the ability of different healthcare providers and systems to exchange health information and data seamlessly, which improves the patient experience and healthcare delivery process. However, this also raises concerns about patient privacy due to the sharing of the health records.

Privacy and Security policies overlap with each other and often get confused with each other. The concept of privacy can apply to a variety of settings, including personal relationships, medical and financial information. Privacy enforcement ensures the protection of personal data such as medical records and financial information. Disclosure of information of such nature could lead to identity theft, financial fraud and other harms to human lives. The privacy of electronic or paper medical records are protected by various laws and regulations such as the Data Protection Act 2018 (incorporating the EU's GDPR) in the UK, The Health Insurance Portability and Accountability Act (HIPAA) in the United States, the Personal Information Protection and Electronic Documents Act (PIPEDA) in Canada and the Data Protection Act 2012 in Ghana.

There are a few technological approaches that can address the privacy challenges associated with interoperability. One approach is to use advanced encryption techniques and secure communication protocols to protect patient data during transmission between disparate systems. Another approach that has been discussed is the use blockchain technology, which can provide a secure, decentralized system for storing and sharing medical records. My proposed interoperability model has a functionality which is targeted at solving privacy and security issues associated with EHRs. This model ensures that every action or view on the patients' record must be approved or authorized by the patient. The system also has an emergency override functionality that would allow for emergency access to the patients record in the circumstance where the patient is incapacitated and cannot authorize any data access.

Ian Kruger

Principles of Diversity as design guides for data analytics projects

Supervisor: Dr Bob Fields

Industry acknowledges, on the whole, low return on investment for data analytics projects, despite the increasingly sophisticated technical capabilities available. Challenges with analytics are more social than technical in nature. While Visual Analytics tools, like Tableau, have become key in bridging the gap between organizational data and non-technical business-users, there is a lack of theoretical support and design guidelines within the discipline that address both the social and the technical requirements of VA systems equally and their interaction. It is our contention that this gap leads to either systems that do not meet the technical requirements to reliably deliver trusted insights, or analytical projects that participate only marginally in the decision making, operations and strategising of the organisation. This problem is symptomatic of the wider organisational inability to leverage the value of diversity. On the other hand, practitioners are solving tensions between social and technical aspects of VA projects and there are many cases of success which could be an important source of new information.

It is the objective of this PhD therefore to deepen our understanding of the role of the design of analytical projects and its relationship to their success. We will explore the overlap of demographic diversity with cognitive diversity (differences in thoughts, insights, perspectives) and the value of this to organisations. We will explore what implications this has for the design and practice of analytics to not only support decision-making, operations, and strategising, but participate fully as a source of innovation (often radically creative) and organisational adaptability.

The proposed study will pursue a longitudinal analysis employing various qualitative research methods including ethnography, participant observation, action research, and in-depth case studies of analytics work in a UK university, of the ways in which practitioners interweave technical systems with social and cultural systems within organisations. The aim is to provide a better theoretical account of, and practical guidelines for, the design and use of VA systems.

This research has implications for managing cognitive diversity within organisations to address the debilitating effects of organisational silos and to create sustainable innovation.

Poster Presentations Abstracts

Aein Khezriazizifar

Terrorism from the Perspective of Shia Muslims

Supervisors: Dr Janroj Keles, Dr Anthony Cullen

Introduction

The Middle East has been a region of significant importance when it comes to terrorism, with various extremist and fundamentalist groups emerging in recent years (Fitzgerald, 2017). In this research:

Aims and Objectives

I aim to explore the political and religious rhetoric used by Sunni fundamentals toward the Shia populations, to understand how the Iranian Shia elite identify and characterize Sunni fundamentalism, To investigate fundamentalist groups, shape the Iranian foreign policy in the Middle East, and find out how Iran's foreign policy in the Middle East combats the activities of Sunni fundamentalist groups and Understand to conceptualize the Shia point of view of the ongoing Sunni fundamentalism group movement and actions between 2014 and 2018.

This study purposes to fill this gap by examining how Shia Muslims interpret extremism, fundamentalism, and terrorism. It intends to provide new first-hand data on terrorism about politics and cover the Middle East religions by focusing on Iran.

Research Methods

The research methods used will include qualitative data from primary and secondary sources. Primary data will be gathered through interviews and secondary sources on the subject included based on a variety of books, journals, and periodicals Additionally, it comprises information on the interviews, a description of the data gathering method, the significance of the sample chosen, and the data analysis procedure.

The qualitative will be applied to gain a better grasp of the concept of Sunni fundamentalism and how Shia political structures and populations react to Sun-In fundamentalism. To optimize the collection of data necessary to accomplish the study's aims, a mix of these two data collection methods will be used. Additionally, it comprises information on the interviews, a description of the data-gathering method, the significance of the sample chosen, and the data analysis procedure. The goal of this study is to investigate and comprehend terrorism, Islamic Sunni extremists' policies and behaviours regarding the Shia sect, the influence of sectarianism on the relationship between Shia and Sunni people, and Jihad conception.

Policymakers, politicians, academics, and journalists I will interview for this research are experts on the problems of Sunni fundamentalism in the Middle East. I specifically chose to interview these groups because I want to understand how Iranian elites identify and define these groups. Their knowledge of the Sunni-Shia divide, religion, politics, and the ongoing power of balance between Iran and the Sunni states in the Middle East will greatly contribute to the ongoing debates on the issues of radicalism, fundamentalism, and terrorism.

The expected findings of this research will contribute to the wider understanding of terrorism and its impact on Shia Muslims in the Middle East. It will provide insights into the specific challenges and opportunities that Shia

Muslims face when dealing with extremism, fundamentalism, and terrorism, and it will offer recommendations for policymakers and practitioners on how to prevent and counteract terrorism from a Shia Muslim perspective.

Keywords: Shia Muslims, terrorism, extremism, fundamentalism, Iran, Middle East

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Ban Ahmed

A proteomics study on the therapeutic effect of EZH2 inhibitor on head and neck cancers and its associated molecular mechanisms

Co-authors: Dr Zhanzhong Shi, Prof Ajit Shah and Dr Xuesong Wen

Head and neck cancers (HNC) are the sixth most common prevalent, heterogeneous and complex malignancies with high morbidity and mortality rate, worldwide. Globally, over 500,000 cases are reported annually. HNC disease is inclusive of a diverse subset of organs including the oral cavity, pharynx and larynx that originate in the upper aero-digestive tract system. Enhancer of zeste homolog 2 (EZH2), an epigenetic regulator, is associated with the proliferation, invasion and metastasis of cancer cells and was shown to be highly expressed in several cancers including HNC. HNC has a relatively low 5-year survival rate (50- 60%) despite the significant therapeutic interventions administered including surgery, chemotherapy and radiotherapy. This might be associated with late diagnosis, metastasis, relapse, as well as the resistance to radio-chemo therapies, which are commonly seen in HNC. As a result, a better treatment option with a higher effectiveness and lower toxicity is warranted. EZH2 inhibitor has been shown to be a promising candidate in targeting epigenetic changes for some epithelial cancers including prostate, ovarian and cervical cancers, but limited research was shown from head and neck squamous cell carcinoma (HNSCC). This project aims at investigating the therapeutic effects of two EZH2 inhibitors (EPZ6438 and GSK343) on two HNSCC cell lines (HPV+ for SCC47 and HPV- for HN5) HNC cells. The following techniques will be used in this study including cell culture, flow cytometry, western blot, immunocytochemistry (ICC), mass spectrometry (MS) and next-generation sequencing (NGS) study. The cells will be grown in culture media in a sterile cell culture environment and treated by two EZH2 inhibitors (GSK343 and EPZ6438) along with a conventional chemotherapeutic agent Cisplatin, as a positive control. All drug concentrations used for the treatment are their relevant inhibitory concentration 50 (IC50) values which will be determined using MTT assay. Following 48 hours of drug treatment, the cells will be trypsinised, washed then stored at -80C for further mass spectrometry analysis to identify the key protein profile changes that will subsequently be used for further validation experiments using western blotting and immunocytochemistry staining. NGS will be used for final confirmation.

Keywords: HNC, EZH2 inhibitors, Cisplatin, HPV, Proteomics.

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Samaneh S Serpooshan

Developing a community- level flood resilience framework using a thematic analysis approach

Supervisors: Dr Sally Priest, Dr Mehri Khosravi (external), Dr Simon McCarthy

Flooding poses a significant environmental hazard, affecting more people than any other natural hazard. Flood risk is increasing due to multiple factors, including climate change, urbanisation, population growth and human settlements in flood-prone areas. As the underlying causes of floods constantly evolve, traditional flood management and control methods have become increasingly unreliable. Recent studies have shifted the focus of

flood research from a conventional mitigation approach to a resilience-based process. This research aims to investigate community flood resilience and develop a framework at the community level, which is under researched.

This is timely research as flood risk management (FRM) in the UK has shifted towards resilience as the dominant paradigm, and community resilience is one of the strategies of the UK government for dealing with the impact of floods. The main aim of this research is to understand the diversity and complexity of community flood resilience and reflect this in the framework. The top-down approach in resilience policy interventions has significant limitations and lacks effectiveness as it fails to include the significance of communities' willingness to enhance their resilience. Therefore, this research will contribute to develop a practical operationalisation flood resilience framework at a community level, adopting a bottom-up approach. This research will work towards more inclusive and sustainable futures by incorporating community perspectives and including them in a flood resilience framework(s). The fundamental criteria which constitutes public resilience and the way that these criteria could be measured and valued, will be explored equally. **Qualitative thematic analysis** will be the dominant research method. Data will be collected through literature review, semi-structured interviews and focus groups. A **resource challenged community** is being targeted because of community resilience factors particularly focusing on financial, and obviously social constraints. A deprived community will be identified by analysing deprivation using Index of Multiple Deprivation (IMD) where are overlapped with flood risk. The research will conclude with developing recommendations for a flood resilience framework, which will be shared with flood authorities and other stakeholders through a collaborative focus group workshop. This platform will facilitate discussions and co-creation of resilient strategies.

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Jiaqing Xu

Within and Between-Session Reliability of Performance Outcomes During the Countermovement Jump, Countermovement Rebound Jump, and Drop Jump Using Different Calculation Methods

Co-authors: Prof Anthony Turner and Dr Chris Bishop

Background

Jump testing is used to assess athletes' neuromuscular performance in, but conducting both countermovement jump (CMJ) and drop jump (DJ) tests in a single session can be fatiguing and time-consuming. The countermovement rebound jump (CMRJ) combines elements of both these assessments, offering a potential alternative. This study aimed to determine the reliability and utility of CMRJ as a substitute for the CMJ and DJ tests.

Methods

Thirty-three participants completed 18 jumps across two testing sessions. Jump height (JH) was measured using four calculation methods: impulse-momentum, flight time, double integration, and motion capture. Strategy-based metrics (countermovement depth, time to take-off, ground contact time and reactive strength index [modified]) were recorded. Reliability was assessed using the intraclass correlation coefficient (ICC), coefficient of variation (CV). Paired-samples *t*-tests were conducted to evaluate systematic bias between sessions, with Hedges' *g* effect sizes to determine magnitude of change.

Results and Findings

All four calculation methods and additional metrics demonstrated good to excellent and between-session reliability (CV ≤ 9.83%, ICC ≥ 0.80) for all three jumps. The flight time calculation significantly overestimated JH compared to the other methods ($p < 0.001$). CMRJ exhibited excellent within-session reliability (CV ≤ 9.81%, ICC ≥ 0.80), with

participants achieving slightly greater JH in CMJ and DJ, although not significantly different. CMRJ can be used as an alternative to the CMJ and DJ tests, given its comparable test scores and strong reliability. However, caution should be exercised when using the flight time calculation method, owing to the significant over-estimation of JH.

Keywords: jump performance, biomechanics, strength and conditioning, sports science, athletic performance

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Iulian Chear

A phenomenological-hermeneutic enquiry into the lived experience of crossdressing

Supervisors: Prof Simon du Plock, Dr Neil Lamont

Crossdressing means wearing clothing, makeup and accessories not traditionally associated with the sex you were assigned at birth (Amnesty International, 2015). It is one of the many identities grouped under the umbrella term 'trans.' Thinking about a more equal and inclusive future, there remains much to be done for people who engage in crossdressing and trans people at large within the UK. The current study aims to examine a community whose voices have not been well represented in the already sparse literature surrounding the trans phenomenon. Starting from their lived experiences and how they make sense of it, this study focuses on how the participants have thought creatively about their identity within the gender/sex binarity and beyond it. As such, eight participants were recruited and interviewed face-to-face and online on Zoom, using a semi-structured in-depth interview. The participants are adults who were assigned male at birth and are involved in regular crossdressing activities as part of their sexual or gender expression, or both, or they self-identify as crossdressers. The method for the study, which is grounded within an existential hermeneutical and phenomenological epistemology, is Interpretative Phenomenological Analysis (IPA). Within the findings, crossdressing has been a meaningful and particular way of being: a way of being gendered, a way of being sexual and a way of being with your body, yourself and others. For the participants, expressing crossdressing has been an existential change in condition, which comes with different levels of freedom, visibility, power, vulnerability, privileges and threats. For each participant, living their lives as crossdressers meant navigating a complex map of temporalities, spaces and people with different degrees of visibility, social acceptance and self-acceptance, which involve different strategies, behaviours and decisions to come out, be out or remain closeted. Overall, crossdressing emerged as a concept at the intersection of gender and sexuality, practice and identity, the personal and the political, the social and the private, the internal and the external, the visible and the hidden.

Keywords: Psychotherapy, Gender, Identity, Crossdressing, Sexuality.

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Bassem A. Bataineh

The Role of HOXB13 Gene in Various Cancer Cell Lines

Supervisors: Dr Ghada Elayat, Dr Beata Burczynska, Dr Lucy Ghali, Dr Dirk Wildeboer

INTRODUCTION: *HOX* genes are a group of highly conserved transcription factors present in four clusters on different chromosomes. In humans, the 39 mammalian Hox genes are organized into four chromosomal clusters; designated *HOXA*, *HOXB*, *HOXC* and *HOXD*, located on chromosomes 7p14, 17q21, 12q13 and 2q31, respectively. *HOXB13* has been implicated in a variety of human cancers, including colon cancer, prostate cancer, and renal cell

carcinoma, as a tumour suppressor gene. Prostate cancer risk is increased by *HOXB13* mutations. This risk is linked to a younger onset and a family cancer pattern that is consistent with hereditary prostate cancer. The hypothesis of this research is that *HOXB13* acts as a tumour suppressor gene in different human cancers. This will be tested using various cancer cell lines and by analysing the genomic DNA, RNA expression levels and HOXB13 protein.

AIM: The aim of this research is to evaluate the role of *HOXB13* on other cancer cell lines including, myeloblastic leukaemia (Kasumi-1), Head and Neck Squamous Cell Carcinoma (HNSCC), urinary bladder cancer (T24), Squamous Cell Carcinoma of the human urinary bladder (SCaBER) and Human Osteosarcoma (HOS-143).

PLANNED RESEARCH METHODS: Human cancer cell lines will be cultured in accordance with the manufacturer's instructions. Standard procedures will be used to extract DNA, RNA, and protein from the cell lines. TaqMan polymerase assay for qPCR of *HOXB13* gene expression will be used, DNA sequencing will be performed. Protein expression will be determined using a Western blot.

CURRENT AND EXPECTED FINDINGS: The primary findings revealed a variance in the amount of gene expression of *HOXB13* which is expressed in HOS-143, T24 and SCaBER while not expressed in other cancer lines mentioned. This provides an early indication of HOXB13 as a molecular marker for these cancers and a rationale for further research into protein levels and function.

Keywords: Cancer, Gene expression, *HOXB13*, Molecular marker, Tumour suppressor gene.

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Omar O Z Zammit

Understanding Domain-Specific Student Internet Search Relevance through a Monitoring Dashboard

Supervisors: Dr Serengul Smith, Dr Clifford De Raffaele, Prof David Windridge

Abstract Higher education lecturers face a range of challenges especially when dealing with large classes and students that are under-prepared for higher education. Lecturers are responsible for ensuring that all students achieve academic success by supporting weaker students and motivating stronger ones. Having such challenges, monitoring students to understand if they are engaged with their course is a must to achieve this, lecturers rely on their intuition, tutorial sessions, individual consultations or online surveys [1]. Pima and Mtui [2] investigated the challenges that lecturers face when dealing with Collaborative Web Technologies (CWT) and outlined that lecturers are in favour of having a common framework that is reliable and that encourages collaboration. Students rely on Internet search engines to increase their knowledge about a topic or to complete a given assignment. The Internet searching behaviour of a student can be viewed as a learning approach [3] and research shows that students develop a more effective searching strategy as the level of education increases [4]. This research aims to gather insights from students' Internet search behaviour and present the findings to the lecturer in a visualisation dashboard. This will facilitate the identification of any deficiencies in the student's search strategy and determine the relevance of their search queries to the domain under study. The methodology adopted in this research involved a framework capable of collecting students browsing data and storing it in a central repository. The framework proposed by Zammit et al. [5, 6, 7] was implemented and distributed to a cohort of eighteen undergraduate students reading a BSc in Computer studies. Students were instructed to utilize the framework during their studies. The students' browsing activity data gathered by the framework was analyzed and aggregated using various queries that could provide insights to the lecturer. Furthermore, these queries were grouped and presented in a dashboard

and distributed amongst lecturers to measure its usability and gather feedback on its overall effectiveness. Lecturers who utilized the proposed dashboard provided positive feedback on the usefulness of monitoring student browsing behaviour. It was also outlined that such a dashboard will enable tailored teaching and improved academic success.

Keywords: Internet searching behavior Monitoring student engagement Searching Strategies Collaborative Framework

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Esther E Evans

Reimagining vocalization through the dislocation, alienation, and estrangement of the Black subject

Supervsisors: Dr Anna Charalambidou, Dr John Timberlake, Dr Keith Piper

I would like to investigate how the experiences of the African diaspora can reimagine vocalization in a fine art practice. I approach the research through experimental phonetic transcriptions of a Jamaican Creolised version of the King James Bible. The standardisation of Jamaican Creole through the King James Bible not only legitimises a

Jamaican language in its own right but provides a useful point to reference of a cultural history influenced by colonialism within the Caribbean.

By presenting the Jamaican language as a form of avant-garde literature challenges traditional conceptions of oral languages as primitive by codifying Jamaican creole to a heightened state of radical creativity.

I will provide some examples of my art practice that aim to expand upon my ideas. The works at this point are 2-dimentional illustrations, however, I am in the early stages of composing a sound-piece of these illustrations which I am happy to talk about.

I aim to reference the philosopher Mladen Dolar's discussion of the voice as well as exploring theoretical concepts of the Black experience of the African Diaspora within the Caribbean, Africa, United States, and Britain. This method contributes to my main aim: An exploration into how language or the voice is reinterpreted through dislocation, alienation, and estrangement. It is my aim that these differences, among the diaspora, will contribute to the reimaging of the materiality of the voice through the absence of language. I believe this research contributes towards new ways in viewing and experiencing language and speech through the Black subject. It also contributes to the exploration of a more inclusive analysis of vocalization in Fine art.

Keywords: Vocalisation, language, cultural identity, diaspora, Afrofuturism

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Vijay Simha Reddy Chennareddy

Extracting Key Information from Appeal Court Documents by using Transformer Models

Supervisors: Prof David Windridge, Prof Mandeep Dhami, Dr Santosh Tirunagari

Natural Language Processing (NLP) has undergone a significant transformation with the advent of Deep Learning and Transformer-based models. However, these models are typically trained initially with Wikipedia and newspaper data. We are here studying the problem of Legal NER and extracting the information from the legal documents obtained from the BAILII Court of Appeal database. Despite the notable progress made in Natural Language Processing (NLP) and Deep Learning, the Legal Domain continues to present several challenges and limitations. These include domain-specificity, various forms of ambiguity (Lexical ambiguity, Semantic ambiguity, and Syntactic ambiguity) and Contextuality.

Extracting the Named Entity Recognitions knowledge from BAILII records, which could relate to the neutral citation number, date of the crime, nature of the offence, and the identities of the parties involved, has the potential to enhance legal research, facilitate the identification of case patterns, enable predictive analysis, and streamline document management. It can encourage the creation of cutting-edge legal technology applications such as Legal-chatbots, case summaries, and legal research tools, thereby boosting public access to legal information and guidance and increasing legal comprehension. As a result, the findings of this ground-breaking study have the potential to drastically alter the legal environment in the United Kingdom and Ireland.

Our primary focus will be on the extraction of casual reasoning as a means of identifying legal bias. To achieve this objective, we will endeavour to develop a customised transformer solution. Initially, the BERT-based language model is pre-trained with the Legal corpus, thereby enhancing the efficacy of language models concerning tasks specific to a particular domain. Subsequently, we utilise a dataset comprising 50 self-annotated documents, each containing a maximum of ten annotation tags, to train BERT (Bidirectional Encoder Representations from Transformers) models to extract Named Entity Recognitions (NERs), Questions and Answers (Q&As), and Document Summaries (DS) from criminal documents.

Finally, an evaluation is conducted on domain-specific tasks such as named entity recognition (NER), question answering (Q&As), and document summarising (DS). The outcomes are subsequently compared with those of the regular BERT Model.

Keywords: Natural Language Processing (NLP), Named Entity Recognition (NERs), Question and Answer System (Q&As), BERT.

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Faryal Batool

Quantum Computing: Revolutionizing Healthcare Leadership and its Future Implication

Supervisors: Dr Kamran Ali, Dr AbouBaker Lasebae

A branch of computer science known as quantum computing uses the concepts of quantum physics to carry out intricate calculations. At the moment, restrictions that prevent constant monitoring in healthcare systems are being addressed via quantum computing. The relevance of data security and privacy in the healthcare industry is rising. There is a clear need for improved data security due to the use of electronic patient records, more control, improved integration, and the growing requirement for information transmission among patients, providers, and carers. By introducing and integrating quantum computing devices into healthcare systems, quantum computing offers a setting that facilitates advanced care.

In this study, a tele-monitoring technique is suggested as a treatment option for patients with life-threatening conditions. Quantum computing can also improve the telemonitoring systems' computational capacity. The amount of data that these systems frequently process comes from numerous sensors and sources. In order to encrypt the data conveyed to the patient's loved ones or doctors, quantum computing will be used. The message will then be decrypted by an application service for security reasons. This initiative will have the effect of allowing patients to remain in the comfort of their own homes while receiving sensory aids via the telemonitoring system. Using the proposed QR employing model, machine learning techniques are used to the dataset. To get rid of inconsistencies and mistakes, the data is pre-processed. The QR-healthcare not only scans the diverse layers that are hidden (including hidden neurons) but also the activation function for any intrusion or malicious behaviour.

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Leo Gately

The Effect of Environment, Behaviours and Habits as Drivers on the Evolution of Intelligence

Supervisors: Prof Tom Dickins, Dr Yvan Russell

Animal intelligence is a poorly understood concept both historically and in the current literature. While it is receiving more interest in recent years, particularly in conjunction with developments in the fields of neuroscience and animal behaviour, the actual evolutionary drivers of animal intelligence have remained little researched and mostly speculative. What then, is the exact nature of an intelligence that is developed under the principles of biological evolution as outlined first by Darwin? In this analysis, a variety of behaviours, environments and habits have been compiled in relation to brain size and encephalization quotient of animals both generally and among their closest relatives, and compared against the aforementioned behaviours, environments and habits to find the relative strength of each factor on the evolution of intelligence in these animals. Once the impact of each factor is calculated, certain EQ predictions are made on animals further away phylogenetically speaking to ascertain the

applicability of the strength among all animals or whether the impact of the factors is relative, and then how relative among family, clade, etc. Because brain tissue is energetically expensive to build and maintain, it is not clear that a larger brain is always optimal. Figuring out the development of the brain in response to evolutionary pressures is a key step towards understanding proper ecosystem management within a changing world.

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Kate McBain

Creating alongly: A transcontextual inquiry into collaborative becoming and creative practice

Supervisors: Dr Clarice Santos, Dr David Adams

This auto-ethnographic study takes as its focus the creative collaborations, and how what we bring into and do within that space impacts the generative potential and quality of that process. It is transcontextual in its appreciation that my knowing (of and about collaboration and creative practice) is an effect of my continual learning as a transdisciplinarian across and between the overlapping fields of education, arts, and creative business. In this formation, the creative collaboration is conceived as contingent, living entity of mutual creative learning, collective becoming, responsive interaction and shared investment – what Nora Bateson (2015) call 'symmathesy' – through which we move alongly (inclusively) with each other. With this in mind, I embark upon a several explorative artistic collaborations; but from a less assured position of collaborator within, as opposed to the peripherally situated role of producer-facilitator-advisor-designer I most usually adopt in such configurations. Documentary and arts-based reflections and memos 'from the field' will be augmented by analyses of other collaborative/devising /play settings; and with insights gleaned through 'practiced' dialogue (a form of interview-whilst-doing some creative or other activity such as walking) with artists and non-artists who similarly embrace collaboration as a "way of thinking and acting" (Cunningham & Sahfique, 2016). The outcomes of this inquiry may comprise a series of vignettes / crafted accounts of doing collaboration; but might just as likely include a workshop model for enhancing inclusive ways of working and the cultural health of organisations, communities, student groups and team situations; or a piece of interactive public art. On a practical level, a deepened, embodied understanding of the collaborative process and co-generative creative practice will enhance my capacity as producer, facilitator and educator for interperspectivity (Giri, 2002) working in service of others' creative endeavours. Beyond this, the findings from and techniques employed within this project potentially hold value to other practitioners involved in diverse collaborations, be them artsinvolved or otherwise. More acutely, this project adds to the scholarship of arts and creative learning in education for sustainability, where collaboration competency is critical to respons-able, creative and hence radical action in the world.