

List of Psychology Honours Projects 2024

(current as of 1st Dec 2023)

Please note that this list is subject to change and is current as of 1st Dec 2023. There may be subsequent additions and/or projects removed from the list.

Students successful in their application for Honours will be sent a Qualtrics link and will be asked to use this to list their **top 20 supervisor preferences** by 5pm 16th Dec 2023. Please note that it is rare that students receive one of their 'top' choices and that all topics reflect high quality research in psychology.

Once completed/circulated, your supervisor allocation is final.

If a topic has a strict pre-requisite (i.e., not just 'suggested', 'beneficial' or 'desirable') and you have not completed that subject, **do not include it** as one of your preferences.

You may contact supervisors via email about their projects if you require additional information.

Robert Barry

PROJECT 1

Name of Supervisor: Robert J. Barry

Name of co-supervisor (if applicable):

Supervisor Email: rbarry@uow.edu.au

Title of project 1: Links between skin conductance and EEG alpha activity.

Description of project 1:

We have published a number of papers linking skin conductance level and EEG alpha level as potential measures of arousal (e.g., Barry et al., 2020). This project will explore these links in archival data from university students in resting conditions. Pink and white noise will be removed from the EEG spectrum (Barry & De Blasio, 2021) prior to its decomposition using frequency PCA (Barry et al., 2019).

How will this novel noise removal impact previous findings?

Each student will be involved in ongoing psychophysiological studies, learning how to collect and process good-quality autonomic and central data, and how to extract measures for visualisation and analysis.

Number of students allowed on this project: 2 (will explore different resting conditions)

Any prerequisites?: Third year UOW Psychophysiology.

References/ recommended readings:

Barry RJ, De Blasio FM, Karamacoska D. (2019). Data-driven derivation of natural EEG frequency components: An optimised example assessing resting EEG in healthy ageing. *J. Neurosci Methods*, 321, 1-11. <https://doi.org/10.1016/j.jneumeth.2019.04.001>

Barry RJ, De Blasio FM, Fogarty JS, Clarke AR. (2020). Natural alpha frequency components in resting EEG and their relation to arousal. *Clinical Neurophysiology*, 131, 205-212. <https://doi.org/10.1016/j.clinph.2019.10.018>

Barry RJ, De Blasio FM. (2021). Characterizing pink and white noise in the human electroencephalogram. *J. Neural Engineering*, 18, 034001. <https://doi.org/10.1088/1741-2552/abe399>

PROJECT 2**Name of Supervisor: Robert J. Barry**

Name of co-supervisor (if applicable):

Supervisor Email: rbarry@uow.edu.au

Title of project 2: Exploring single-subject natural EEG frequency components.

Description of project 2:

We have argued in the literature that separation of EEG or ERP components by PCA should avoid misallocation of variance between conditions or groups by using separate PCAs for each condition and/or group (e.g., Barry et al., 2016). Yet these “separate” PCAs have been carried out on combined EEG spectra or ERPs, ignoring misallocation of variance *between subjects* within the condition or group. This project will explore single-subject extraction of PCA components using archival data from university students in resting conditions. Pink and white noise will be removed from each EEG spectrum (Barry & De Blasio, 2021) prior to its decomposition using frequency PCA (Barry et al., 2019).

How will these separate-subject frequency components contribute to, and differ from, the usual group results?

Each student will be involved in ongoing psychophysiological studies, learning how to collect and process good-quality autonomic and central data, and how to extract measures for visualisation and analysis.

Number of students allowed on this project: **2** (will explore different resting conditions)

Any prerequisites?: Third year UOW Psychophysiology.

References/ recommended readings:

Barry RJ, De Blasio FM, Fogarty JS, Karamacoska D. (2016). ERP Go/NoGo condition effects are better detected with separate PCAs. *International J. Psychophysiology*, 106, 50-64. <https://doi.org/10.1016/j.ijpsycho.2016.06.003>

Barry RJ, De Blasio FM, Karamacoska D. (2019). Data-driven derivation of natural EEG frequency components: An optimised example assessing resting EEG in healthy ageing. *J. Neurosci Methods*, 321, 1-11. <https://doi.org/10.1016/j.jneumeth.2019.04.001>

Barry RJ, De Blasio FM. (2021). Characterizing pink and white noise in the human electroencephalogram. *J. Neural Engineering*, 18, 034001. <https://doi.org/10.1088/1741-2552/abe399>

Jessica Bartschi

PROJECT 1

Name of Supervisor: Dr Jessica Bartschi

Name of co-supervisor (if applicable):

Supervisor Email: jmills@uow.edu.au

Title of project 1: Food and your mood: Understanding overeating behaviours in depression

Description of project 1: Food intake choices and overeating behaviours may be influenced by appetite hormones in individuals with depression. Students will work with the supervisor to develop a specific thesis question in this area from within an existing research program.

Number of students allowed on this project: 2

Any prerequisites? (Please list): Distinction grade or higher in both PSYC234/329 and PSYC359

References/ recommended readings:

1. Bartschi, J. & Greenwood, LM. (2023). Food addiction as a mediator between depressive symptom severity and body mass index. *Appetite*, 190, 107008.
2. Mills, J., Larkin, T., Deng, C. & Thomas, S. (2019). Weight gain in Major Depressive Disorder: Linking appetite and disordered eating to leptin and ghrelin. *Psychiatry Research*, 279, 244-251.
3. Mills, J., Thomas, S., Larkin, T. & Deng, C. (2020). Overeating and food addiction in Major Depressive Disorder: Links to peripheral dopamine. *Appetite*, 148, 104586.
4. Mills, J., Thomas, S., Larkin, T., Pai, N. & Deng, C. (2018). Problematic eating behaviours, changes in appetite, and weight gain in Major Depressive Disorder: The role of leptin. *Journal of Affective Disorders*, 240, 137-145.
5. Mills, J., Larkin, T., Deng, C. & Thomas, S. (2021). Cortisol in relation to problematic eating behaviours, adiposity, and symptom profiles in Major Depressive Disorder. *Comprehensive Psychoneuroendocrinology*, 7, 100067.

PROJECT 2**Name of Supervisor: Dr Jessica Bartschi**

Name of co-supervisor (if applicable):

Supervisor Email: jmills@uow.edu.au

Title project 2: Psychedelics as a treatment for mental ill-health: Australian perceptions and attitudes

Description of project 2: Certain psychedelic drugs, including psilocybin and MDMA, have recently been made more accessible for the treatment of treatment-resistant depression and PTSD respectively. The student will analyse data obtained from a broader investigation to ascertain what the perceptions of the general public are towards psychedelic drugs as a treatment for mental ill-health, and what factors may prevent individuals from engaging with psychedelic treatments for mental health conditions.

Number of students allowed on this project: 1

Any prerequisites? (Please list): Completion of PSYC359

References/ recommended readings:

1. Erku, D., Greenwood, L.M., Hallinan, C., Graham, M., Bartschi, J.G., Renaud, E. & Scuffham, P. (2022). From growers to patients: multi-stakeholder views on the use of, and access to medicinal cannabis in Australia. *PLoS One*, 17(11), e0277355.
2. Kunstler, B., Smith, L., Langmead, C., Goodwin, D., Wright, B. & Hatty, M. (2023). 'We don't want to run before we walk': the attitudes of Australian stakeholders towards using psychedelics for mental health conditions. *Public Health Research & Practice*, 33(3), e3332321.

Alison Beck

PROJECT 1

Name of Supervisor: Alison Beck

Name of co-supervisor (if applicable): Peter Kelly, Briony Larance

Supervisor Email: alisonbe@uow.edu.au

Title of project: ROM and substance use treatment

Description of project:

Evidence supports the benefits of routine outcome monitoring (ROM) and feedback for mental health outcomes among people seeking treatment. Comparatively less is known about ROM and feedback for the treatment of substance use, in particular: What is the best way to develop and use feedback for maximum clinical effect? The details of the project will be developed collaboratively with an interested student, but the research would be conducted with support from the NHMRC Centre for Research Excellence for Meaningful Outcomes in Substance Use Treatments.

Number of students allowed on this project: 1

Any prerequisites? (Please list): Nil

References/ recommended readings: Contact supervisors

Timothy Byron**PROJECT 1****Name of Supervisor: Tim Byron**

Name of co-supervisor (if applicable):

Supervisor Email: tbyron@uow.edu.au

Title of project 1: The salience and memorability of phrases in pop music

Description of project 1: Some specific phrases in the context of a pop song - 'hooks' – appear to be more salient and memorable to listeners, and may be more likely to cause an earworm. This project aims to investigate the cognitive reasons for these phrases being more memorable, using techniques such as continuous self-report methodology (i.e., participants moving a slider continuously as they listen to the music) and algorithmic/AI extraction of different musical layers (e.g., the drums or the vocals) to isolate specific phrases in the music and their contribution to the salience and memorability of the music.

Number of students allowed on this project: 3

Any prerequisites? (Please list): PSYC327 and/or having a musical background aren't necessary but are definitely an advantage

References/ recommended readings:

Byron, T., & O'Regan, J. (2022). *Hooks in popular music*. Palgrave Macmillan.

Bregman, A. (1994). *Auditory scene analysis: The perceptual organisation of sound*. MIT Press.

Jakubowski, K., Finkel, S., Stewart, L., & Mullensiefen, D. (2017). Dissecting an earworm: melodic features and song popularity predict involuntary musical imagery. *Psychology of Aesthetics, Creativity, and the Arts*, 11(2), 122-135. <http://dx.doi.org/10.1037/aca0000090>

PROJECT 2**Name of Supervisor: Tim Byron**

Name of co-supervisor (if applicable):

Supervisor Email: tbyron@uow.edu.au

Title project 2: Uncovering the cognitive mechanisms behind involuntary musical imagery

Description of project 2: In recent years, research on involuntary musical imagery (i.e., the songs that get stuck in your head) has become increasingly focused on the cognitive mechanisms that retrieve the song from your mental storage and place it in your consciousness, and those that maintain the imagery in a loop. In this research project, the aim would be to expand upon currently existing theory and experimental research on involuntary to further understand the phenomenon, using either self-caught or probe-caught experience sampling methodology (i.e., randomly sending notifications to people using an app on their phone) as a data collection tool.

Number of students allowed on this project: 3

Any prerequisites? (Please list): PSYC327 and/or having a musical background aren't necessary but are definitely an advantage

References/ recommended readings:

Byron, T. P., & Fowles, L. C. (2015). Repetition and recency increases involuntary musical imagery of previously unfamiliar songs. *Psychology of Music*, 43(3), 375–389.

<https://doi.org/10.1177/0305735613511506>

Liikkanen, L. A., & Jakubowski, K. (2020). Involuntary musical imagery as a component of ordinary music cognition: A review of empirical evidence. *Psychonomic Bulletin & Review*, 27(6), 1195–1217.

<https://doi.org/10.3758/s13423-020-01750-7>

Schubert, E. (2023). Involuntary, Limited, and Contiguously Repeating Musical Imagery (InLaCReMI): Reconciling theory and data on the musical material acquired by earworms. *Music & Science*, 6.

<https://doi.org/10.1177/20592043231165661>

Peter Caputi**PROJECT 1****Name of Supervisor: Peter Caputi**

Name of co-supervisor (if applicable):

Supervisor Email:

Title of project 1: Student Presenteeism

Description of project 1:

This study will examine (i) prevalence of presenteeism among undergraduate Psychology students, and (ii) the reasons students give for being presentee. In addition, the study will further examine the underlying psychological mechanisms that underpin students choose to be presentee, in particular, the study will examine the role of emotions such as shame and guilt and the role that emotion regulation plays in this process.

Number of students allowed on this project: 2

Any prerequisites? (Please list): No

References/ recommended readings:

Komp, R., Kauffwld, S., & Ianiro-Dahm, P. (2022). Student Presenteeism in digital times – a mixed methods approach. *International Journal of Environmental Research and Public Health*, 19, 16982.

Brosi, P & Gerpott, F. H. (2023). Stayed at home – But can't stop working despite being ill? Guilt as a driver of presenteeism at work and home. *Journal of Organisational Behavior*, 44, 853-870.

McGregor, A. & Caputi, P. (2022). *Presenteeism Behaviour: Current Research, Theory and Future directions*. Palgrave.

Amy Chan

PROJECT 1

Name of Supervisor: Amy Chan

Name of co-supervisor (if applicable): N/A

Supervisor Email: amychan@uow.edu.au

Title of project 1: The ‘how’, ‘what’, and ‘so what’ of thinking about better and worse possible worlds: Further explorations of the Counterfactual Thinking for Negative Events Scale – Revised (CTNES-R)

Description of project 1:

When reflecting on negative experiences, people sometimes think about how things could have been different. How may such counterfactual thoughts (i.e., “contrary-to-fact” thinking) vary according to the type of experience encountered? How may our personality and other dispositional factors be related to different ways in which we engage in counterfactual thinking? More important, how may such thinking be related to emotional outcomes and our adaptive functioning? Building upon preliminary insights from three studies conducted at UOW in 2023, I will work with a motivated student to develop a specific project of mutual interest, to conduct a study that utilises a revised and expanded version of the Counterfactual Thinking for Negative Events Scale (CTNES; Rye et al., 2008).

Number of students allowed on this project: 1-2 students

Any prerequisites? (Please list): No

References/ recommended readings:

Angus, B. M., & Phillips, W. J. (2021). Self-referent upward counterfactual thinking mediates the relationship between self-compassion and depression. *Australian Psychologist*, *56*(1), 61-69. <https://doi.org/doi.org/10.1080/00050067.2021.1890980>

Barnett, M. D., & Martinez, B. (2015). Optimists: It could have been worse; Pessimists: It could have been better: Dispositional optimism and pessimism and counterfactual thinking. *Personality and Individual Differences*, *86*, 122-125. <https://doi.org/doi.org/10.1016/j.paid.2015.06.010>

Rye, M. S., Cahoon, M. B., Ali, R. S., & Daftary, T. (2008). Development and validation of the counterfactual thinking for negative events scale. *Journal of personality assessment*, *90*(3), 261-269. <https://doi.org/https://doi.org/10.1080/00223890701884996>

PROJECT 2**Name of Supervisor: Amy Chan**

Name of co-supervisor (if applicable): N/A

Supervisor Email: amychan@uow.edu.au

Title project 2: Counterfactual thinking, moral learning and improvement

Description of project 2:

Some recent studies have begun to examine the potential connections between counterfactual thinking (thoughts of how things could have been different), moral reasoning and prosocial behaviour. I would be happy to discuss this general topic further with an interested student, and develop an experimental study that will contribute further knowledge to this area.

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

Stanley, M. L., Cabeza, R., Smallman, R., & De Brigard, F. (2021). Memory and counterfactual simulations for past wrongdoings foster moral learning and improvement. *Cognitive Science*, 45, e13007. <https://doi.org/10.1111/cogs.13007>

Timmons, S., Gubbns, E., Almeida, T., & Byrne, R. M. J. (2021). Imagined alternative to episodic memories of morally good acts. *The Journal of Positive Psychology*, 16, 2, 178-197. <https://doi.org/10.1080/17439760.2019.1689410>

PROJECT 3**Name of Supervisor: Amy Chan**

Name of co-supervisor (if applicable): N/A

Supervisor Email: amychan@uow.edu.au

Title of project 3: Does imagining “it could have been better” make things better or worse?

Description of project 3:

This is a general honours topic that explores the nuances and utility of imagining how things could have been better (i.e., upward counterfactual thinking) when reflecting on one’s experiences. Although it has long been proposed that upward counterfactuals can be adaptive in that they can help people prepare better for future endeavours (e.g., Roese & Epstude, 2017), a number of recent studies have suggested that upward counterfactuals can sometimes not be as adaptive as once thought (e.g., Giurge & Woolley, 2023; Li et al. 2023). I am particularly interested in their potential applied implications for understanding and supporting student learning.

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

Giurge, L. M., & Wooley, K. (2023) Working during non-standard work time undermines intrinsic motivation. *Organisational Behavior and Human Decision Processes*, 170, 104134. <https://doi.org/10.1016/j.obhdp.2022.104134>

Li, X., Hsee, C. K., & O’Brien, E. (2023). “It could be better” can make it worse: When and why people mistakenly communicate upward counterfactual information. *Journal of Marketing Research*, 60(2), 219-236. <https://doi.org/10.1177/00222437221112312>

Roese, N. J., & Epstude, K. (2017). The functional theory of counterfactual thinking: New evidence, new challenges, new insights. In *Advances in Experimental Social Psychology* (Vol. 56, pp. 1-79). Elsevier.

Rodney Croft**PROJECT 1****Name of Supervisor: Rodney Croft**

Name of co-supervisor (if applicable):

Supervisor Email: rcroft@uow.edu.au

Title of project 1: Does RF EMF affect cortisol, an index of stress

Description of project 1: Radiofrequency (RF) electromagnetic fields (EMF) are emitted from many modern devices, such as mobile phones, base stations and WiFi. Although research to date has failed to identify any adverse effects of such RF EMF on cognitive processes, whether subtle affective processes are affected has not been determined. The present study will use archival data to determine whether RF EMF affects cortisol, a stress response hormone, in a university sample. Although data collection has already been completed, you will gain experience running a study via participation in a similar study starting in 2024.

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

Verrinder A, Loughran SP, Dalecki A, Freudenstien F, Croft RJ. Can explicit suggestions about the harmfulness of EMF exposure exacerbate a nocebo response in healthy controls? *Environmental Research*. 2018, 166:409-17.

Verrinder A, Loughran SP, Anderson V, Hillert L, Rubin J, Oftedal G, Croft RJ. IEI-EMF provocation case studies: A novel approach to testing sensitive individuals. *Bioelectromagnetics* 2017, 39(2):132-43.

PROJECT 2**Name of Supervisor: Rodney Croft**

Name of co-supervisor (if applicable):

Supervisor Email: rcroft@uow.edu.au

Title project 2: The role of the nocebo effect in IEI-EMF

Description of project 2: Radiofrequency (RF) electromagnetic fields (EMF) are emitted from many modern devices, such as mobile phones, base stations and WiFi. Although research to date has failed to identify any adverse effects of such RF EMF, many people claim to be adversely affected by such exposure. This condition can be debilitating, and is referred to as 'ideographic environmental intolerance - attributed to EMF' (IEI-EMF). Our, and other research, has shown that IEI-EMF can be caused by the nocebo response. The present study is designed to replicate and extend on that research to determine whether EMF-induced nocebo symptoms include the cortisol stress response, and whether personality factors can predict it. The two students will work on the same study, but test different hypotheses.

Number of students allowed on this project: 2

Any prerequisites? (Please list): No

References/ recommended readings:

Verrender A, Loughran SP, Dalecki A, Freudenstien F, Croft RJ. Can explicit suggestions about the harmfulness of EMF exposure exacerbate a nocebo response in healthy controls? *Environmental Research*. 2018, 166:409-17.

Verrender A, Loughran SP, Anderson V, Hillert L, Rubin J, Oftedal G, Croft RJ. IEI-EMF provocation case studies: A novel approach to testing sensitive individuals. *Bioelectromagnetics* 2017, 39(2):132-43.

Nicholas Day

PROJECT 1

Name of Supervisor: Nicholas Day

Name of co-supervisor (if applicable):

Supervisor Email: nday@uow.edu.au

Title project 1: Topics in Personality Disorder

To be discussed with student – contact supervisor.

See Project Air Strategy for Personality Disorders website: <https://www.uow.edu.au/project-air/>

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

Day, N. J., Hunt, A., Cortis-Jones, L., & Grenyer, B. F. (2018). Clinician attitudes towards borderline personality disorder: A 15-year comparison. *Personality and Mental Health*, 12(4), 309-320.

Day, N. J., Townsend, M. L., & Grenyer, B. F. (2020). Living with pathological narcissism: a qualitative study. *Borderline Personality Disorder and Emotion Dysregulation*, 7(1), 1-14.

Grenyer, B. F., Townsend, M. L., Lewis, K., & Day, N. (2022). To love and work: A longitudinal study of everyday life factors in recovery from borderline personality disorder. *Personality and Mental Health*, 16(2), 138-154.

Day, N. J., Townsend, M. L., & Grenyer, B. F. (2022). Pathological narcissism: An analysis of interpersonal dysfunction within intimate relationships. *Personality and mental health*, 16(3), 204-216.

Day, N. J., Townsend, M. L., & Grenyer, B. F. (2022). Living with pathological narcissism: core conflictual relational themes within intimate relationships. *BMC psychiatry*, 22, 1-11.

Frances De Blasio**PROJECT 1****Name of Supervisor: Frances De Blasio**

Name of co-supervisor (if applicable):

Supervisor Email: francesd@uow.edu.au

Title of project 1: EEG amplitude coupling: Associations with affective disturbance

Description of project 1:

Amplitude coupling between the delta-beta and delta-alpha EEG bands has recently been suggested as a possible marker of a general predisposition to affective disturbance (Knyazev et al., 2019). Such an association may reflect the involvement of the cholinergic system which has been implicated in the modulation of mood episodes (e.g., Dulawa & Janowsky, 2019), as well as being linked to EEG activity in the delta and alpha bands (e.g., Graef et al., 2011). While delta-beta coupling has been widely investigated and found to show strong associations with anxiety, few studies have investigated coupling measures in relation to depression. The current project will examine an archival EEG dataset, seeking links between EEG coupling and anxiety and depression scores in a *non-clinical* population. Students who select this project are welcome to negotiate important aspects of this project including (but not limited to) the EEG band pair that they assess coupling between, and the method used to quantify the band data (i.e., traditional band vs. data driven frequency components). Please email for more information, or to discuss this project further.

Number of students allowed on this project: 3

Any prerequisites? (Please list): Good performance in PSYC329 or equivalent

References/ recommended readings:

Knyazev, G.G., Savostyanov, A.N., Bocharov, A.V., & Aftanas, L.I. (2019). EEG cross-frequency correlations as a marker of predisposition to affective disorders. *Heliyon*, 5, e02942. <https://doi.org/10.1016/j.heliyon.2019.e02942>

Dulawa, S. C., & Janowsky, D. S. (2019). Cholinergic regulation of mood: From basic and clinical studies to emerging therapeutics. *Molecular Psychiatry*, 24(5), 694-709. <https://doi.org/10.1038/s41380-018-0219-x>

Graef, S., Schönknecht, P., Sabri, O., & Hegerl, U. (2011). Cholinergic receptor subtypes and their role in cognition, emotion, and vigilance control: An overview of preclinical and clinical findings. *Psychopharmacology*, 215(2), 205-229. <https://doi.org/10.1007/s00213-010-2153-8>

Marc de Rosnay

PROJECT 1

Name of Supervisor: Marc de Rosnay

Name of co-supervisor (if applicable):

Supervisor Email: marcd@uow.edu.au

Title of project 1: Nurturing caregiving play and social cognition in preschool children

Description of project 1: While it is commonly assumed that children's play develops and changes through the early childhood period (e.g., increased engagement in share-pretence or socio-dramatic play), it is unclear how children's play preferences and interests are related to these developments. Work in this area will provide the chance for students to consider two different approaches to understanding children's play and ask how changes in their perspective-taking abilities and their play-preferences provide information about their development and social engagement.

Number of students allowed on this project: 2

Any prerequisites? (Please list): No pre-requisites BUT you will need a Working with Children Check

References/ recommended readings:

<https://learningthroughplay.com/explore-the-research/the-scientific-case-for-learning-through-play>

PROJECT 2**Name of Supervisor: Marc de Rosnay**

Name of co-supervisor (if applicable):

Supervisor Email: marcd@uow.edu.au

Title of project 2: New early childhood educators' understanding of the social cognitive and communicative abilities of infants: Links with practice and professional identity

Description of project 2: This project, which can be done as a qualitative or quantitative investigation, will examine how new early childhood education and care professionals understand the social cognitive and communicative abilities of infants (under 2 years of age), and the extent to which such understanding is related to their approaches to interacting with and planning for infants, and the extent to which they see themselves as having 'professional expertise'.

Number of students allowed on this project: 2

Any prerequisites? (Please list): No pre-requisites BUT you may need a Working with Children Check

References/ recommended readings:

- Degotardi, S., & Davis, B. (2008). Understanding infants: Characteristics of early childhood practitioners' interpretations of infants and their behaviours [Article]. *Early Years*, 28(3), 221-234. <https://doi.org/10.1080/09575140802393686>
- Degotardi, S., & Gill, A. (2019). Infant educators' beliefs about infant language development in long day care settings [Article]. *Early Years*, 39(1), 97-113. <https://doi.org/10.1080/09575146.2017.1347607>

PROJECT 3**Name of Supervisor: Marc de Rosnay**

Name of co-supervisor (if applicable):

Supervisor Email: marcd@uow.edu.au

Title of project 3: Can young children employ an ethical framework to navigate social deliberations?

Description of project 3:

Four- to 6-year-old children embody some paradoxes when it comes to their moral awareness and social understanding. Arguably, they are more morally and socially sensitive than they have been given credit for, but it is far from clear if they know that certain social deliberations require an ethical framework to reach adequate solutions. The object of this project is to explore young children's thinking about *how to approach or solve* social situations that, arguably, have an ethical dimension. Unlike previous research, which asks *if* children are motivated by social and moral considerations, and how they understand such considerations, this project will explore the capacity of young children to see ethically complex social situations (appropriate to their experience) *as domains of ethical consideration*.

Number of students allowed on this project: 2

Any prerequisites? (Please list): No pre-requisites BUT you may need a Working with Children Check

References/ recommended readings:

- Dahl, A., & Paulus, M. (2019). From Interest to Obligation: The Gradual Development of Human Altruism [Article]. *Child Development Perspectives*, 13(1), 10-14. <https://doi.org/10.1111/cdep.12298>
- Kingsford, J. M., Hawes, D. J., & de Rosnay, M. (2022). The development of moral shame indicates the emergence of moral identity in middle-childhood [Article]. *Journal of Moral Education*, 51(3), 422-441. <https://doi.org/10.1080/03057240.2021.1898936>
- Weller, D., & Lagattuta, K. H. (2014). Children's Judgments About Prosocial Decisions and Emotions: Gender of the Helper and Recipient Matters. *Child Development*, 85(5), 2011-2028. <https://doi.org/10.1111/cdev.12238>

Simone Favelle

PROJECT 1

Name of Supervisor: Simone Favelle

Name of co-supervisor (if applicable):

Supervisor Email: simone_favelle@uow.edu.au

Title of project 1: This face does not exist: can humans distinguish between real and AI generated faces?

Description of project 1: Artificial intelligence (AI) has developed to the point that it can generate faces that are not only indistinguishable from human faces, but in some instances are judged to be more real than human faces or “hyperreal”. The implications for ethical use of AI faces are huge. I am interested both in how individual differences impact decisions about AI faces and in the image information that may be used or misused in discriminating AI from real faces. I am open to discussing research questions but some ideas for studies in this topic area are: (1) are there individual differences in how well people can discriminate between AI and human faces? Maybe people who are better at matching real faces are better at AI detection; (2) Are humans better at discriminating groups of AI or human faces? Perhaps we are better able to detect or abstract “humanness” or “AI-ness” from an array of faces compared to a single face; and (3) given that most AI systems (eg GAN) are trained on white faces, are there cross race effects in AI/human face discrimination?

Number of students allowed on this project: 1

Any prerequisites? (Please list): PSYC327 an advantage

References/ recommended readings:

Miller, E. J., Steward, B. A., Witkower, Z., Sutherland, C. A., Krumhuber, E. G., & Dawel, A. (2023). AI Hyperrealism: Why AI Faces Are Perceived as More Real Than Human Ones. *Psychological Science*, 09567976231207095.

Nightingale, S. J., & Farid, H. (2022). AI-synthesized faces are indistinguishable from real faces and more trustworthy. *Proceedings of the National Academy of Sciences*, 119(8), e2120481119.

Tucciarelli R., Vehar N., Chandaria S., Tsakiris M. (2022). On the realness of people who do not exist: The social processing of artificial faces. *IScience*, 25(12), Article 105441.

PROJECT 2**Name of Supervisor: Simone Favelle**

Name of co-supervisor (if applicable):

Supervisor Email: simone_favelle@uow.edu.au

Title of project 2: Can stimulus set explain inconsistent findings of a multiple image benefit in simultaneous matching tasks?

Description of project 2: Matching and recognising unfamiliar faces is an important task in security and social contexts, but it is a task which can be highly error prone. Providing multiple images and information about within-person variability has been shown to consistently improve unfamiliar face recognition, however the findings for face matching are mixed. Specifically, studies using an image database developed at UNSW (eg, White et al 2014 and Hunnisett & Favelle, 2021) find a multiple image advantage in a simultaneous matching task but research from labs in the UK (eg, Ritchie et al 2021) do not. In this project we collaborate with researchers in the UK to test whether the different image databases used in our labs can account for the differences in our findings.

Number of students allowed on this project: 1

Any prerequisites? (Please list): PSYC327 an advantage

References/ recommended readings:

Hunnisett, N., & Favelle, S. (2021). Within-person variability can improve the identification of unfamiliar faces across changes in viewpoint. *Quarterly Journal of Experimental Psychology*, 74, 1873-1887.

Ritchie, K. L., Kramer, R. S. S., Mileva, M., Sandford, A., Burton, M. (2021). Multiple-image arrays in face matching tasks with and without memory. *Cognition*, 211, 1-11.

White, D., Burton, M., Jenkins, R., & Kemp, R. I. (2014). Redesigning photo-ID to improve unfamiliar face matching performance. *Journal of Experimental Psychology: Applied*, 20, 166-173.

PROJECT 3**Name of Supervisor: Simone Favelle**

Name of co-supervisor (if applicable):

Supervisor Email: simone_favelle@uow.edu.au

Title of project 3: Visual sampling of face information across changes in view

Description of project 3: Eye-tracking techniques have been used quite extensively to investigate how we process information about faces. However, the vast majority of this work focuses on just one type of view of a face – the front view. The aim of this research project is to use an expanding spotlight technique to identify what information is being sampled and available for face recognition when faces are viewed and recognised across different angles. The findings will shed light on how we process face information in real world situations where we encounter faces across a variety of views.

Number of students allowed on this project: 1

Any prerequisites? (Please list): PSYC327 or PSYC328; good programming skills (Matlab, Python); and strong maths/statistics/data processing skills

References/ recommended readings:

Bindemann, M., Scheepers, C., & Burton, A. M. (2009). Viewpoint and center of gravity affect eye movements to human faces. *Journal of Vision*, 9, 7-7.

Chelnokova, O., & Laeng, B. (2011). Three-dimensional information in face recognition: An eye-tracking study. *Journal of Vision*, 11(13), 27-27.

Favelle, S., & Palmisano, S. (2018). View specific generalisation effects in face recognition: Front and yaw comparison views are better than pitch. *Plos one*, 13(12), e0209927.

Miellet, S., Vizioli, L., He, L., Zhou, X., & Caldara, R. (2013). Mapping face recognition information use across cultures. *Frontiers in Psychology: Perception Science*, 4:34.

Royer, J., Blais, C., Barnabé-Lortie, V., Carré, M., Leclerc, J., & Fiset, D. (2016). Efficient visual information for unfamiliar face matching despite viewpoint variations: It's not in the eyes!. *Vision Research*, 123, 33-40.

Brin Grenyer

PROJECT 1

Name of Supervisor: Brin Grenyer

Name of co-supervisor (if applicable):

Supervisor Email: grenyer@uow.edu.au

Title of project 1: Therapy dose versus outcome in treatment of personality disorder

Description of project 1: The treatment of personality disorder has generally been considered resource intensive in terms of therapist time and costly in terms of medical care. What has not been studied is the mix of resources associated with a year of treatment and associations with clinical, social and vocational improvements. This project provides scope to study longitudinal data on large data sets, allowing statistical prediction and modelling of different outcomes depending on patient service use and needs. The project allows both theory development, statistical modeling and hypothesis formation, creation of new data sets, and application to real-world mental health settings. The project is located in the Project Air Strategy for Personality Disorders (building 22)

Number of students allowed on this project: 1

Any prerequisites? (Please list): Confidence in statistical modelling of large data sets

References/ recommended readings:

Grenyer BFS., Townsend ML, Lewis K, Day N. (2022). To love and work: A longitudinal study of everyday life factors in recovery from borderline personality disorder. Personality and Mental Health, 16(2) p.138-154 <https://doi.org/10.1002/pmh.1547>

Miller CE, Lewis KL, Huxley E, Townsend ML, Grenyer BFS (2018). A 1-year follow-up study of capacity to love and work: What components of borderline personality disorder most impair interpersonal and vocational functioning? Personality and Mental Health, 12(4), 334-344. <https://doi.org/10.1002/pmh.1432>

Meuldijk D, McCarthy A, Bourke ME, Grenyer BFS (2017). The value of psychological treatment for borderline personality disorder: Systematic review and cost offset analysis of economic evaluations. PLoS ONE 12(3): e0171592. doi:10.1371/journal.pone.0171592

PROJECT 2**Name of Supervisor: Brin Grenyer**

Name of co-supervisor (if applicable):

Supervisor Email: grenyer@uow.edu.au

Title of project 2: Interpersonal functioning in personality disorder

Description of project 2: Personality disorders have been described as a developmental disorder involving a failure to resolve the key milestones of industry, identity and intimacy. Although the treatment of choice is psychological therapy, this engages the patient in an interpersonal relationship that can present a number of challenges. These include engagement (attendance), focus (goal identification) and alliance (trust in the relationship). There are few studies that have drawn together these interpersonal correlates to investigate their potential association with improvement or non-response over a year of treatment. The project allows the student to develop their theoretical knowledge to develop hypotheses that can be tested on data sets developed on people in real-world mental health settings. This will suit a student with sound data analysis skills and an interest and curiosity in interpersonal relationships from attachment, personality theory and psychosocial developmental perspectives. The project is located in the Project Air Strategy for Personality Disorders (building 22)

Number of students allowed on this project: 1

Any prerequisites? (Please list):

References/ recommended readings:

Woodbridge J, Townsend ML, Reis SL, Grenyer BFS (2023) Patient perspectives on non-response to psychotherapy for borderline personality disorder: a qualitative study. *Borderline Personality Disorder and Emotional Dysregulation*. 10, 13. <https://doi.org/10.1186/s40479-023-00219-y>

Patriarca, E., Tanzilli, A., Brusadelli, E., Lingiardi, V., & Grenyer, B. F. S. (2023). A multidimensional assessment of therapeutic outcomes: Toward a Psychodynamic Diagnostic Manual (PDM-2)-oriented approach to psychotherapy research. *Psychoanalytic Psychology*, 40(2), 128–133. <https://doi.org/10.1037/pap0000455>

Hashworth TA, Reis S, Townsend ML, O'Garr J, Grenyer BFS (2022) Personal agency and borderline personality disorder: a longitudinal study of outcomes. *BMC Psychiatry* 22, 566, <https://doi.org/10.1186/s12888-022-04214-5>

Jane Herbert

PROJECT 1

Name of Supervisor: Jane Herbert

Name of co-supervisor (if applicable):

Supervisor Email: herbertj@uow.edu.au

Title of project 1: Balancing work and family: Dads' perspectives on parenting

Description of project 1: Fathers play a significant and unique role in children's development, but they are often left out of family research. Students will have a unique opportunity to collect survey or interview data on fathers' attitudes towards their work-life balance, their wellbeing, and their contribution to their child's development. The aim is to move beyond accounts of time spent in parenting, to understanding what fathers and children do in their time together. Areas of particular interest include how fathers feel after they return to work from parental leave, or the role of fathers in supporting their child's involvement in sports, hobbies, and interests.

Number of students allowed on this project: 2

Any prerequisites? (Please list): psyc361

References/ recommended readings:

Cabrera, N.J. (2020) Father involvement, father-child relationship, and attachment in the early years, *Attachment & Human Development*, 22:1, 134-138, DOI: [10.1080/14616734.2019.1589070](https://doi.org/10.1080/14616734.2019.1589070)

Cabrera, N. J., Volling, B. L., & Barr, R. (2018). Fathers are parents, too! Widening the lens on parenting for children's development. *Child Development Perspectives*, 12(3), 152–157. <https://doi.org/10.1111/cdep.12275>

Churchill, B., & Craig, L. (2021). Men's and women's changing attitudes towards fatherhood and working fathers in Australia. *Current Sociology*, 70(6), 943–963. <https://doi.org/10.1177/00113921211012737>

Herbert, J.S., Dwyer, E., Mitchell, A.S., Duursma, E., & Bird, A.L. (2023). "I've got more of a role to play": Australian fathers' perspectives on parenting through the lens of COVID-19 lockdown. *Psychology of Men & Masculinities*, 24(3), 225–236. <https://doi.org/10.1037/men0000433>

PROJECT 2**Name of Supervisor: Jane Herbert**

Name of co-supervisor (if applicable):

Supervisor Email: herbertj@uow.edu.au

Title project 2: Well-being in pregnancy and birth

Description of project 2:

Pregnancy and the months following birth are times of heightened psychological vulnerability. This project will involve talking with individuals at the beginning of their parenting journey about the factors that contribute to how they feel about themselves, their child, and their confidence in being a parent. There may also be the opportunity to collect data with Perinatal healthcare providers (i.e. midwives, early childhood nurses) about how they support families to have a positive transition to parenting.

Number of students allowed on this project: 2

Any prerequisites? (Please list):

References/ recommended readings:

Mahdavi, Z., Amiri-Farahani, L., & Pezaro, S. (2022). Storytelling in Pregnancy and Childbirth: An Integrative Review of the Literature. *Journal of Pregnancy*, 2022, 8483777. <https://doi.org/10.1155/2022/8483777>

McKelvin, G., Thomson, G., & Downe, S. (2021). The childbirth experience: A systematic review of predictors and outcomes. *Women & Birth*, 34(5), 407-416. <https://doi.org/10.1016/j.wombi.2020.09.021>

McNamara, J., Risi, A., Bird, A.L. Townsend, M.L., & Herbert, J.S. (2022). The role of pregnancy acceptability in maternal mental health and bonding during pregnancy. *BMC Pregnancy & Childbirth*, 22, 267. <https://doi.org/10.1186/s12884-022-04558-6>

Walsh, T.B., Carpenter, E., Costanzo, M.A., Howard, L., Reynders, R. (2021). Present as a partner and a parent: mothers' and fathers' perspectives on father participation in prenatal care. *Infant Mental Health Journal*, 42(3): 386–399. <https://doi.org/10.1002/imhj.21920>

Harold Hill**PROJECT 1****Name of Supervisor: Harold Hill**

Name of co-supervisor (if applicable):

Supervisor Email: harry@uow.edu.au

Title of project 1: Topics in perception of familiar faces based on 3D shape.

Description of project 1:

Recognising 3D models of familiar faces rendered without texture (akin to marble sculptures) is surprisingly difficult. The project will investigate how well we can match 3D face models of celebrities to their photographs and/or names. The specific topic can be tailored to the student's interest and may involve examining the Inversion Effect and/or Face Composite effect.

Number of students allowed on this project: 2

Prerequisites: PSYC327 and/or PSYC328 preferred

References/ recommended readings:

Bruce, V., Healey, P., Burton, M., Doyle, T., Coombes, A., & Linney, A. (1991). Recognising Facial Surfaces. *Perception*, 20(6), 755-769. <https://doi.org/10.1068/p200755>

Hill, H., Bruce, V., & Akamatsu, S. (1995). Perceiving the sex and race of faces: the role of shape and colour. *Proc Biol Sci*, 261(1362), 367-373. <https://doi.org/10.1098/rspb.1995.0161>

Burt, A. L., & Crewther, D. P. (2020). The 4D space-time dimensions of facial perception. *Frontiers in psychology*, 11, 1842.

PROJECT 2**Name of Supervisor: Harold Hill**

Name of co-supervisor (if applicable):

Supervisor Email:

Title of project 2: Monocular stereopsis

Description of project 2:

Monocular stereopsis is “the characteristically vivid impression of tangible solid form, immersive negative space and realness that obtains under certain viewing and stimulus conditions” (Vishwanath, 2014). Illusions of depth reversal such as the hollow face (Hill & Johnston, 2007) and “reverspectives” both give a vivid impression of stereopsis even when viewed monocularly. This project will use such illusions and/or two-dimensional pictures as stimuli to investigate viewing conditions that promote stereopsis and to test between competing absolute depth scale and cue conflict based explanations (Vishwanath, 2014; Rogers, 2019).

Number of students allowed on this project: 2

Prerequisites: PSYC327 and/or PSYC328 preferred

References/ recommended readings:

- Hill, H., & Johnston, A. (2007). The hollow-face illusion: object-specific knowledge, general assumptions or properties of the stimulus?. *Perception*, *36*(2), 199–223. <https://doi.org/10.1068/p5523>
- Rogers, B. (2019). Toward a new theory of stereopsis: A critique of Vishwanath (2014). *Psychological Review*, *126*(1), 162–169. <https://doi.org/10.1037/rev0000131>
- Vishwanath D. (2014). Toward a new theory of stereopsis. *Psychological review*, *121*(2), 151–178. <https://doi.org/10.1037/a0035233>

PROJECT 3**Name of Supervisor: Harold Hill**

Name of co-supervisor (if applicable): Simone Favelle

Supervisor Email: harry@uow.edu.au

Title project 3: Unfamiliar face matching

Description of project 3:

People are poor at matching pictures of unfamiliar faces for identity. Performance is improved when an array of 3 or more images is provided. This project will test matching from an average made multiple images of a person to an array or single image in order to test what identity specific information averages capture/what additional information people derive from arrays of images.

Number of students allowed on this project: 1

Prerequisites: PSYC327 and/or PSYC328 preferred

References/ recommended readings:

Kramer, R. S., Ritchie, K. L., & Burton, A. M. (2015). Viewers extract the mean from images of the same person: A route to face learning. *Journal of vision*, 15(4), 1. <https://doi.org/10.1167/15.4.1>

Ritchie, K. L., Mireku, M. O., & Kramer, R. S. S. (2020). Face averages and multiple images in a live matching task. *British Journal of Psychology*, 111(1), 92–102. <https://doi.org/10.1111/bjop.12388>

White, D., Burton, A. M., Jenkins, R., & Kemp, R. I. (2014). Redesigning photo-ID to improve unfamiliar face matching performance. *Journal of Experimental Psychology: Applied*, 20(2), 166–173. <https://doi.org/10.1037/xap0000009>

Stuart Johnstone

PROJECT 1

Name of Supervisor: Prof Stuart Johnstone

Name of co-supervisor (if applicable):

Supervisor Email: sjoihnsto@uow.edu.au

Title of project 1: Short-term neurofeedback in adults: effect on day-to-day and lab-measured executive functions

Description of project 1: Short-term neurofeedback training can promote self-regulation of brain activity with reported benefits to lab-based measures of executive functions (EFs) such as working memory in adults. This project will aim to replicate such effects and extend to consider day-to-day EFs (represented by everyday activities that depend on EFs). There may be scope for considering adults diagnosed with ADHD in addition to typically functioning adults.

Number of students allowed on this project: 2

Any prerequisites? (Please list): PSYC329

References/ recommended readings:

Gadea, M., Aliño, M., Hidalgo, V., Espert, R., & Salvador, A. (2020). Effects of a single session of SMR neurofeedback training on anxiety and cortisol levels. *Neurophysiologie Clinique*, 50(3), 167–173. <https://doi.org/10.1016/j.neucli.2020.03.001>

Reis, J., Portugal, A. M., Fernandes, L., Afonso, N., Pereira, M., Sousa, N., & Dias, N. S. (2016). An Alpha and Theta Intensive and Short Neurofeedback Protocol for Healthy Aging Working-Memory Training. *Frontiers in Aging Neuroscience*, 8(JUN). <https://doi.org/10.3389/fnagi.2016.00157>

Tseng, Y. H., Tamura, K., & Okamoto, T. (2021). Neurofeedback training improves episodic and semantic long-term memory performance. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-021-96726-5>

PROJECT 2**Name of Supervisor: Prof Stuart Johnstone**

Name of co-supervisor (if applicable):

Supervisor Email: sjohnsto@uow.edu.au

Title project 2:

Description of project 2: Our neurocognitive assessment tool accurately predicts group membership for children from China with AD/HD of the inattentive presentation. This project will consider the classification accuracy of the tool for children from Australia with ADHD of the inattentive presentation, and compare the variables that contribute to prediction.

Number of students allowed on this project: 1

Any prerequisites? (Please list): PSYC329

References/ recommended readings:

Johnstone, S. J., Parrish, L., Jiang, H., Zhang, D. W., Williams, V., & Li, S. (2021). Aiding diagnosis of childhood attention-deficit/hyperactivity disorder of the inattentive presentation: Discriminant function analysis of multi-domain measures including EEG. *Biological Psychology*, 161. <https://doi.org/10.1016/j.biopsycho.2021.108080>

Johnstone, S. J., Jiang, H., Sun, L., Rogers, J. M., Valderrama, J., & Zhang, D. (2021). Development of Frontal EEG Differences Between Eyes-Closed and Eyes-Open Resting Conditions in Children: Data From a Single-Channel Dry-Sensor Portable Device. *Clinical EEG and Neuroscience*, 52(4), 235–245. <https://doi.org/10.1177/1550059420946648>

Briony Larance**PROJECT 1****Name of Supervisor: Briony Larance**

Name of co-supervisor (if applicable): Laura Robinson

Supervisor Email: blarance@uow.edu.au

Title of project 1: Vaping, risk perception and health literacy among young people

Description of project 1: This project will draw on existing data collected from a cross-sectional survey of ~350 young people. There is the opportunity to collect more data as part of a group project. The research question will be developed collaboratively with the student, drawing on theories of health behaviour and behaviour change, but could focus on topics such as cannabis vaping, vaping dependence, risk perception and health literacy.

Number of students allowed on this project: 2

Any prerequisites? (Please list): none

References/ recommended readings: none

PROJECT 2**Name of Supervisor: Briony Larance**

Name of co-supervisor (if applicable): Alison Beck, Peter Kelly

Supervisor Email: blarance@uow.edu.au

Title project 2: Measuring clients' experiences of alcohol and other drug treatment services

Description of project 2: Central to patient-centred care principles, patient-reported experience measures (PREMs) capture patients' experiences of their healthcare and services to find out if services delivered support the outcomes and experiences that patients expect. The details of the project will be developed collaboratively with an interested student, but the research would be conducted with support from the NHMRC Centre for Research Excellence for Meaningful Outcomes in Substance Use Treatments.

Number of students allowed on this project: 1

Any prerequisites? (Please list):

References/ recommended readings: none

Peter Leeson**PROJECT 1****Name of Supervisor: Peter Leeson**

Name of co-supervisor (if applicable):

Supervisor Email: pleeson@uow.edu.au

Title of project 1: Topics in Social psychology

Description of project 1: This is a project to be designed in consultation with the student. Past projects have looked at things such as climate change beliefs as well and as how people consume scientific information. Other projects have looked things such as emotional intelligence and cognitive styles, though am happy to consider other topics as well.

Number of students allowed on this project: 3

Any prerequisites? (Please list): None

References/ recommended readings: TBA

Caitlin Liddelow

PROJECT 1

Name of Supervisor: Dr Caitlin Liddelow

Name of co-supervisor (if applicable):

Supervisor Email: caitlinl@uow.edu.au

Title of project 1: Sport differences amongst women

Description of project 1: Following on from an Honours project conducted in 2023, this project will employ a mixed methods design to explore the influence of psychosocial variables on why women participate in traditional feminine vs masculine sports.

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

<https://doi.org/10.1016/j.psychsport.2010.10.005>

<https://doi.org/10.1080/13573322.2020.1768525>

PROJECT 2

Name of Supervisor: Dr Caitlin Liddelow

Name of co-supervisor (if applicable):

Supervisor Email: caitlinl@uow.edu.au

Title project 2: Return-to-Sport in the Postpartum Period

Description of project 2: This project will aim to explore and understand the factors related to feeling or being 'ready' to return to sport in the postpartum period. This study will focus on mothers in the community who play sport socially, rather than athletes. Can be a qualitative, quantitative or mixed-methods project.

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

<http://dx.doi.org/10.1136/bjsports-2021-104877>

<http://dx.doi.org/10.1136/bjsports-2023-107189>

PROJECT 3

Name of Supervisor: Dr Caitlin Liddelow

Name of co-supervisor (if applicable):

Supervisor Email: caitlinl@uow.edu.au

Title of project 3: Barriers and facilitators for sport re-engagement in early motherhood

Description of project 3: This project will be a qualitative project, using thematic analysis. Several interviews have already been conducted with mothers who have re-engaged and not re-engaged in sport since having a child.

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

<https://doi.org/10.1016/j.mhpa.2023.100555>

Ely Marceau

PROJECT 1

Name of Supervisor: Ely Marceau

Name of co-supervisor (if applicable):

Supervisor Email: elym@uow.edu.au

Title of project 1: Treatment of substance use disorder in young people

Description of project 1: Topics to be developed with student using treatment outcome data of young people aged 16-24 attending a residential substance use disorder program.

Number of students allowed on this project: 3

Any prerequisites? (Please list):

References/ recommended readings:

- 1) Marceau, E. M., Holmes, G., Cutts, J., Mullaney L., Meuldijk, D., Townsend, M. L., & Grenyer, B. F. S. (2021). Now and then: A ten-year comparison of young people in residential substance use disorder treatment receiving group dialectical behaviour therapy. *BMC Psychiatry*, 21, 362. <https://doi.org/10.1186/s12888-021-03372-2>
- 2) Marceau, E. M., Holmes, G., Mullaney L., & Grenyer, B. F. S. (2023). Factors associated with treatment response at 1-year follow-up from a residential substance use disorder programme for young people aged 16-24 years. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-023-01152-5>
- 3) Degenhardt, L. S., E., Patton, G., Hall, W. D., & Lynskey, M. (2016). The increasing global health priority of substance use in young people. *Lancet Psychiatry*, 3(3), 251-264. [https://doi.org/10.1016/s2215-0366\(15\)00508-8](https://doi.org/10.1016/s2215-0366(15)00508-8)
- 4) Meisel, S. N., Pielech, M., Magill, M., Sawyer, K., & Miranda, R. (2022). Mechanisms of behavior change in adolescent substance use treatment: A systematic review of treatment mediators and recommendations for advancing future research. *Clinical Psychology: Science and Practice*. <https://doi.org/10.1037/cps0000089>
- 5) Gerra, M. L., Gerra, M. C., Tadonio, L., Pellegrini, P., Marchesi, C., Mattfeld, E., Gerra, G., & Ossola, P. (2021). Early parent-child interactions and substance use disorder: An attachment perspective on a biopsychosocial entanglement. *Neuroscience and Biobehavioral Reviews*, 131, 560–580. <https://doi.org/10.1016/j.neubiorev.2021.09.052>

Sebastien Miellet

PROJECT 1

Name of Supervisor: Sebastien Miellet

Name of co-supervisor (if applicable):

Supervisor Email: smiellet@uow.edu.au

Title of project 1: Investigating individual differences in face-processing ability with multidimensional scaling, oculomotor patterns and Representational Similarity Analysis (RSA)

Description of project 1:

Visually processing faces is highly important for our day-to-day social functioning, as a glimpse at a face can convey a lot of socially relevant information such as the person's identity (who the person is) and beyond (Oosterhof & Todorov, 2008). However, face recognition ability varies between people, from congenital prosopagnosia, whereby individuals are unable to recognise people by their faces at all, to 'super recognisers', who achieve remarkable performance on face recognition tests (Russel et al., 2009). Increasing our understanding of individual differences in face processing will have implications for settings where accurate face recognition is crucial, such as law enforcement (Dunn, Towler, Kemp & White, 2023).

Using the gaze-contingent 'spotlight' paradigm created by Caldara, Zhou, and Miellet (2010), Dunn, Varela, Nicholls, Papinutto, White, and Miellet (2022) have recently demonstrated that 'super recognisers' differ from typical viewers in how they sample information from faces. Their findings show that, compared to typical viewers, super recognisers disperse their gaze more broadly across the face. Thus, further research is needed to augment our understanding of how the utility of different visual information varies across people with varying facial recognition ability as well as stimuli that reveal different kinds of visual information available to individuate faces.

Communicating information about faces is important in social settings, as we often need to describe faces to others (e.g., John has thick eyebrows and a chiselled jawline). Facial descriptions are also used in forensic settings, for example using witness testimony to construct a likeness of an offender. Eyewitness descriptions, however, tend to be inconsistent and provide little detail about facial characteristics, which results in descriptions that are error-prone for identification purposes, such as in line-ups (van Koppen & Lochun, 1997). Tyler, Towler, Kemp, and White (2022) have recently demonstrated that face recognition expertise may be linked to the ability to verbally describe faces. Indeed, super-recognisers produce better quality verbal descriptions of faces and can also recognise faces based on others' verbal descriptions at a higher accuracy compared to typical viewers. This makes it important to relate verbal descriptions and information sampling strategies across individual differences in perceptual skills with faces. Indeed, more diagnostic information extracted from more efficient sampling could lead to better semantic descriptions offering the level of abstraction necessary for generalisation, robustness to variations, long-term storage, and, in turn, better performance.

Comparing performance across different tasks, behavioural and neural measures, and computational models, is difficult because these data come from a variety of sources and usually have different formats, which makes it difficult to utilise traditional data analysis techniques. Representational Similarity Analysis (RSA) will allow us to overcome this by transforming any data into Representational Dissimilarity Matrices, allowing the modelling of the patterns in data regardless of format (Kriegeskorte et al., 2008). Using RSA techniques, the project will be able to characterise participants' representations

in a face categorisation task (judging how visually similar faces are), verbal face descriptions as well as gaze patterns and information sampling strategies across different face recognition ability.

Typical viewers' (e.g., undergraduate psychology students via the UOW SONA system) face processing abilities will be assessed using conventional tools (e.g., Glasgow Face Matching Test, UNSW Face Test, Cambridge Face Memory Test). Participants will arrange faces on a computer screen such that the Euclidean distances between faces represent their visual similarity, as previously done with judgements of similarity between objects by Charest et al. (2014). Multidimensional Scaling (MDS) would then be used to produce Representational Dissimilarity Matrices (RDMs, Kriegeskorte et al., 2008). RDMs can also be created from gaze pattern data (Nicholls, Jean-Charles, de Lissa, Lao, Caldara & Mielle, 2019) and semantic embeddings extracted by Deep Neural Networks from verbal descriptions (Doerig, Kietzmann, Allen, Wu, Naselaris, Kay & Charest, 2022). Non-linear hierarchical models can then be used to determine how the different representational spaces (subjective categorisation, information sampling, semantic representation) are influenced by the participants (face recognition ability) and stimuli (shape, surface reflectance, image quality, face pose, age, sex, ethnicity, etc) characteristics.

Number of students allowed on this project: 3

Any prerequisites? (Please list): PSYC328 (visual perception), strong programming skills (Matlab, Python), strong advanced statistics, appetite to self-learn neural networks (deep, convolutional).

References/ recommended readings:

- Charest, I., Kievit, R. A., Schmitz, T. W., Deca, D., & Kriegeskorte, N. (2014). Unique semantic space in the brain of each beholder predicts perceived similarity. *Proceedings of the National Academy of Sciences*, *111*(40), 14565-14570. <https://doi.org/doi:10.1073/pnas.1402594111>
- Doerig, A., Kietzmann, T.C., Allen, E., Wu, Y., Naselaris, T., Kay, K., & Charest, I., (2022). Semantic scene descriptions as an objective of human vision. *ArXiv*, *arXiv:2209.11737*. <https://doi.org/10.48550/arXiv.2209.11737>
- Dunn, J. D., Varela, V. P. L., Nicholls, V. I., Papinutto, M., White, D., & Mielle, S. (2022). Face-Information Sampling in Super-Recognizers. *Psychological Science*, *33*(9), 1615-1630. <https://doi.org/10.1177/09567976221096320>
- Kriegeskorte, N., Mur, M., & Bandettini, P. (2008). Representational similarity analysis - connecting the branches of systems neuroscience. *Frontiers in Systems Neuroscience*, *2*. <https://doi.org/10.3389/neuro.06.004.2008>

Leonie Miller

PROJECT 1

Name of Supervisor: Leonie Miller

Name of co-supervisor (if applicable):

Supervisor Email: leoniem@uow.edu.au

Title of project 1: The frequency effect in serial recognition: A function of capacity?

Description of project 1: The serial recognition task is a companion short-term memory task to the serial recall task. It asks participants to judge whether two consecutively presented lists have items in the same or different order. The presence/absence of long-term memory effects (e.g. better performance in lists of high than low word frequency items) in the serial recognition task has important implications for short-term memory theory. Chubala et al. (2019) found that no frequency effect was observed in serial recognition, but alternatively work in our lab suggests that effects do arise (e.g. Josifovski, 2022). One suggested reason for this difference in outcomes is the relative level of difficulty of the tasks for participants. This project will systematically test the presence or absence of the frequency effect in serial recognition across lists of different lengths, and relate these findings to independent measures of participants' digit spans, to test the proposition that the presence of the frequency effect occurs at the point where participants' short-term memory capacity is exceeded.

Number of students allowed on this project: 2

Any prerequisites? (Please list): PSYC327 preferred

References/ recommended readings:

Chubala, C. M., Neath, I., & Surprenant, A. M. (2019). A comparison of immediate serial recall and immediate serial recognition. *Canadian Journal of Experimental Psychology / Revue canadienne de psychologie expérimentale*, 73(1), 5–27. <https://doi.org/10.1037/cep0000158>

Josifovski, Natasha, The Role of Serial Recognition in Explicating Short-Term Memory, Doctor of Philosophy thesis, School of Psychology, University of Wollongong, 2022. <https://ro.uow.edu.au/theses1/1400> [Chapters 9 &10].

Macken, B., Taylor, J. C., & Jones, D. M. (2014). Language and short-term memory: The role of perceptual-motor affordance. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 40(5), 1257–1270. <https://doi.org/10.1037/a0036845>

Sam Moreton

PROJECT 1

Name of Supervisor: Sam Moreton

Name of co-supervisor (if applicable):

Supervisor Email: smoreton@uow.edu.au

Title of project 1: Acute Subjective Effects of Psychedelics and changes in death attitudes

Description of project 1:

Assuming psychedelics typically change people's attitudes towards death, why is that the case? Is it because they provide people with contact to alien multi-dimensional entities that provide the meaning of life? Probably not. But it could be something to do with the acute effects of psychedelics – things like the “psychedelic induced mystical experience” or a “confrontation” with the fear of death. I have data from a few surveys looking at this and this project would use this archival data to look at how aspects of the psychedelic experience predict changes in death attitudes.

Number of students allowed on this project: 1

Any prerequisites? (Please list):

References/ recommended readings:

Moreton, S. G., Szalla, L., Menzies, R. E., & Arena, A. F. (2020). Embedding existential psychology within psychedelic science: reduced death anxiety as a mediator of the therapeutic effects of psychedelics. *Psychopharmacology*, 237, 21-32.

PROJECT 2**Name of Supervisor: Sam Moreton**

Name of co-supervisor (if applicable):

Supervisor Email: smoreton@uow.edu.au

Title of project 2: Psychedelics and metaphysical beliefs

Description of project 3: This project will solve the hard-problem of consciousness. No, it won't, but it will involve running a survey looking at changes in metaphysical beliefs about the nature of consciousness following psychedelic experiences. A couple of recent papers (see below) have found things like a shift away from physicalist explanations of consciousness and towards explanations like "panpsychism": the notion that consciousness is a fundamental quality of everything in the Universe. I'd like to look a bit more closely and unpack this a bit more and also see how these changes might relate to changes in death attitudes.

Number of students allowed on this project: 2

Any prerequisites? (Please list): None

References/ recommended readings:

Timmermann, C., Kettner, H., Letheby, C., Roseman, L., Rosas, F. E., & Carhart-Harris, R. L. (2021). Psychedelics alter metaphysical beliefs. *Scientific reports*, *11*(1), 22166.

Nayak, S. M., Singh, M., Yaden, D. B., & Griffiths, R. R. (2023). Belief changes associated with psychedelic use. *Journal of Psychopharmacology*, *37*(1), 80-92.

Stephen Palmisano

PROJECT 1

Name of Supervisor: Prof Stephen Palmisano

Name of co-supervisor (if applicable): Joel Teixeira

Supervisor Email: stephenp@uow.edu.au

Title of project 1: Mitigating Cybersickness in Virtual Reality

Description of project 1: This ARC funded project will examine the effectiveness of different countermeasures in either reducing or preventing cybersickness during head-mounted display (HMD) based virtual reality (VR). It will make use of either custom code or commercially-available videogames for testing.

Number of students allowed on this project: 1

Any prerequisites? (Please list): Either PSYC328 or PSYC327

References/ recommended readings:

Clifton, J., & Palmisano, S. (2020). Effects of steering locomotion and teleporting on cybersickness and presence in HMD-based virtual reality. *Virtual Reality*, 24, 453-468. <https://doi.org/10.1007/s10055-019-00407-8>

Palmisano, S. & Constable, R. (2022). Reductions in cybersickness with repeated exposure to HMD-based virtual reality are game-specific. *Virtual Reality*, 26, 1373-1389. <https://doi.org/10.1007/s10055-022-00634-6>

Teixeira, J., & Palmisano, S. (2021). Effects of dynamic field-of-view restriction on cybersickness and presence in HMD-based virtual reality, *Virtual Reality*, 25, 433–445. <https://doi.org/10.1007/s10055-020-00466-2>

PROJECT 2**Name of Supervisor: Prof Stephen Palmisano**

Name of co-supervisor (if applicable): Joel Teixeira

Supervisor Email: stephenp@uow.edu.au

Title project 2: Enhancing experiences in HMD VR using galvanic vestibular stimulation

Description of project 2: This ARC funded project will examine whether we can improve the spatial presence and feelings of self-motion induced in HMD VR users by stimulating their inner ears via galvanic vestibular stimulation. Immersive VR code will visually simulate their accelerating self-motions over a 3-D terrain either with or without extra (consistent/inconsistent) vestibular stimulation.

Number of students allowed on this project: 1

Any prerequisites? (Please list): Either PSYC328 or PSYC329

References/ recommended readings:

Clifton, J., & Palmisano, S. (2020). Effects of steering locomotion and teleporting on cybersickness and presence in HMD-based virtual reality. *Virtual Reality*, 24, 453-468. <https://doi.org/10.1007/s10055-019-00407-8>

Kim, J., Wagner, P., Ranjan, R., Cai, Y. Ping, X., Iwasaki, S., Palmisano, S. (2022). Using galvanic vestibular stimulation to enhance user experiences in HMD-based virtual reality. *Proceedings of the 29th International Display Workshops (IDW '22)*, pp. 1-4.

Kim, J., Palmisano, S., Luu, W., & Iwasaki, S. (2021). Effects of linear visual-vestibular conflict on presence, perceived scene stability and cybersickness in the Oculus Go and Oculus Quest. *Frontiers in Virtual Reality*, 2, 582156. <https://doi.org/10.3389/frvir.2021.582156>.

Samantha Reis

PROJECT 1

Name of Supervisor: Samantha Reis

Name of co-supervisor (if applicable):

Supervisor Email: sreis@uow.edu.au

Title of project 1: Attachment, Splitting and Dissociation within BPD

Description of project 1:

Individuals with Borderline Personality Disorder (BPD) often display the symptom of splitting: vacillating quickly from idealisation of important others to devaluing them. This extreme fluctuation in perceptions of others creates significant problems in relationships and in therapy. Splitting is thought to be a defence mechanism that functions as a means of reducing anxiety in emotionally stressful situations. Dissociative symptoms (e.g., depersonalisation and derealisation) are similarly posited as a means of coping with emotional dysregulation. The aim of this project is to examine the co-occurrence of splitting and dissociation within BPD, and how these may relate to adult attachment styles. Since dissociation is thought to emerge from attachment related trauma, an understanding of how current attachment styles interact with these symptoms may inform treatments for people experiencing these problems.

This study will utilise a cross-sectional quantitative design. The student will collect data from a community population, and the specific research question will be developed collaboratively with the student.

Number of students allowed on this project: 2

Any prerequisites? (Please list): None

References/ recommended readings:

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: a test of a four-category model. *Journal of personality and social psychology*, 61(2), 226.

Korzekwa, M. I., Dell, P. F., & Pain, C. (2009). Dissociation and borderline personality disorder: an update for clinicians. *Current psychiatry reports*, 11(1), 82-88.

Choi-Kain, L. W., Fitzmaurice, G. M., Zanarini, M. C., Laverdière, O., & Gunderson, J. G. (2009). The relationship between self-reported attachment styles, interpersonal dysfunction, and borderline personality disorder. *The Journal of nervous and mental disease*, 197(11), 816-821.

Gould, J. R., Prentice, N. M., & Aislie, R. C. (1996). The Splitting Index: Construction of a scale measuring the defense mechanism of splitting. *Journal of Personality Assessment*, 66(2), 414-430.

Hashworth, T., Reis, S., & Grenyer, B. F. (2021). Personal agency in borderline personality disorder: The impact of adult attachment style. *Frontiers in Psychology*, 12, 669512.

Woodbridge, J., Reis, S., Townsend, M. L., Hobby, L., & Grenyer, B. F. (2021). Searching in the dark: Shining a light on some predictors of non-response to psychotherapy for borderline personality disorder. *Plos one*, 16(7), e0255055.

PROJECT 2**Name of Supervisor: Samantha Reis**

Name of co-supervisor (if applicable):

Supervisor Email: sreis@uow.edu.au

Title of project 2: Stigma in Personality Disorder: The Role of Perfectionism and Attachment

Description of project 2:

Research indicates that individuals high in maladaptive perfectionism are at greater risk of mental health problems, like personality disorders. Perfectionism has also been linked to mental health self-stigma. In this sense, the need to present as 'perfect' may inhibit help seeking because of fears around stigmatisation from mental health professionals and others in the social world. Borderline Personality Disorder (BPD) and pathological narcissism are among the most stigmatised mental illnesses, yet there is a scarcity of research examining correlates, moderators, and mediators of stigma for these conditions. Since perfectionism is common within these groups, a tendency towards perfectionism may make individuals more vulnerable to internalisation of stigma, which may reduce help seeking and exacerbate symptoms of narcissistic and borderline pathology. This research aims to examine various correlates of stigma within personality disorder, potentially focussing on perfectionism and adult attachment styles.

This study will utilise a cross-sectional quantitative design. The student will collect data from a community population, and the specific research question will be developed collaboratively with the student.

Number of students allowed on this project: 2

Any prerequisites? (Please list): None

References/ recommended readings:

Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest*, 15(2), 37-70.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: a test of a four-category model. *Journal of personality and social psychology*, 61(2), 226.

Choi-Kain, L. W., Fitzmaurice, G. M., Zanarini, M. C., Laverdière, O., & Gunderson, J. G. (2009). The relationship between self-reported attachment styles, interpersonal dysfunction, and borderline personality disorder. *The Journal of nervous and mental disease*, 197(11), 816-821.

Reis, S., Huxley, E., Eng Yong Feng, B., & Grenyer, B. F. (2021). Pathological Narcissism and Emotional Responses to Rejection: The Impact of Adult Attachment. *Frontiers in Psychology*, 12, 679168.

Hashworth, T., Reis, S., & Grenyer, B. F. (2021). Personal agency in borderline personality disorder: The impact of adult attachment style. *Frontiers in Psychology*, 12, 669512.

Woodbridge, J., Reis, S., Townsend, M. L., Hobby, L., & Grenyer, B. F. (2021). Searching in the dark: Shining a light on some predictors of non-response to psychotherapy for borderline personality disorder. *Plos one*, 16(7), e0255055.

Laura Robinson

PROJECT 1

Name of Supervisor: Laura Robinson

Name of co-supervisor (if applicable):

Supervisor Email: laurar@uow.edu.au

Title of project 1: Correlates and prevalence of sober curious and temporary abstinence challenges in young adults/emerging adults

Description of project 1:

Explore the prevalence of sober curious and temporary alcohol abstinence challenges awareness and engagement in young adults. Examine correlates such as, mental health (e.g., anxiety, depression), motivations (weight control, wellness, charity), gender other substance use, loneliness/connectedness, social norms, self-efficacy, personality, gender role attitudes, coping approaches. We can discuss which correlates students are interested whether from this list or otherwise.

Number of students allowed on this project: 2

Any prerequisites? (Please list): Nil

References/ recommended readings:

Butters, A., Kersbergen, I., Holmes, J., & Field, M. (2023). Temporary abstinence challenges: What do we need to know?. *Drug and Alcohol Review*.

Siconolfi, D., Tucker, J. S., Pedersen, E. R., Perez, L. G., Dunbar, M. S., Davis, J. P., ... & D'Amico, E. J. (2023). Sober curiosity and participation in temporary alcohol abstinence challenges in a cohort of US emerging adults. *Journal of Studies on Alcohol and Drugs, jsad-23*. Note – may need to request through uow library, this usually takes about 24 hours for access.

PROJECT 2**Name of Supervisor: Laura Robinson**

Name of co-supervisor (if applicable): -

Supervisor Email: laurar@uow.edu.au

Title of project 2: Psychosocial risks and hazards, and mental health of young adults in the workplace.

Description of project 2: Examine psychosocial risks/hazards, including but not limited to, job control, workplace bullying, autonomy, social support, work-life interface, job burnout, mental health and anxiety among young adults in the workplace. Potentially with a focus on retail, hospitality and caring industries. Happy to discuss specific interests within this topic area.

Number of students allowed on this project: 1

Any prerequisites? (Please list):

References/ recommended readings:

<https://www.safework.sa.gov.au/workplaces/mentally-healthy-workplaces/psychological-hazards>

Arjona-Fuentes, J. M., Ariza-Montes, A., Han, H., & Law, R. (2019). Silent threat of presenteeism in the hospitality industry: Examining individual, organisational and physical/mental health factors. *International Journal of Hospitality Management*, 82, 191-198.

Nejad & Thomson, 2022. *Mental Health in Hospitality: The need for industry-specific solutions*

October 2022. DOI:10.13140/RG.2.2.18501.93928

Mark Schira

PROJECT 1

Name of Supervisor: Mark Schira

Name of co-supervisor (if applicable):

Jessica Barschi, Luiza Carvalho, Brooklyn Wright

Supervisor Email: mschira@uow.edu.au

Title of project 1: Brain imaging, hippocampus and connectivity

Description of project 1:

We are looking for honours students supporting our brain imaging projects. These projects investigate human brain anatomy and connectivity in developmental cohorts (children) or adult cohorts using medicinal cannabis as compared to normal adult cohorts. As part of the human brain mapping project we have developed cutting edge high resolution MRI protocols, which are now used in projects investigating the relation of brain structures such as the superior longitudinal fasciculus, the hippocampus or the amygdala. Students will be involved in subject recruitment, psychological assessment, MRI data collection, brain segmentation (i.e. hippocampus) and fibre tracking. Student will require computer skills and the readiness to learn programming.

Number of students allowed on this project: 2

Any prerequisites? (Please list): PSYC362

References/ recommended readings:

Schira, M.M., Isherwood, Z.J., Kassem, M.S. et al. HumanBrainAtlas: an in vivo MRI dataset for detailed segmentations. *Brain Struct Funct* 228, 1849–1863 (2023). <https://doi.org/10.1007/s00429-023-02653-8>.

Dahlgren, M. K., Gonenc, A., Sagar, K. A., Smith, R. T., Lambros, A. M., El-Abboud, C., & Gruber, S. A. (2022). Increased white matter coherence following three and six months of medical cannabis treatment. *Cannabis and Cannabinoid Research*, 7(6), 827-839.

Dalton, M. A., McCormick, C., & Maguire, E. A. (2019). Differences in functional connectivity along the anterior-posterior axis of human hippocampal subfields. *NeuroImage*, 192, 38-51.

PROJECT 2**Name of Supervisor: Mark Schira**

Will Neaves, Brooklyn Wright

Supervisor Email: mschira@uow.edu.au

Title of project 2: The organization of cortical area V4 in human

Description of project 2:

Visual cortex area V4, has been subject to an ongoing debate in humans, essentially since the early days of retinotopic mapping in 1997. While the organization of human area V1, V2 and V3 was confirming the expectations from earlier work in macaques, the results for human V4 did not seem to agree with the expectations. Since then, many authors and drastically improved methodologies have confirmed that human V4 is organized different than in non-human primates, is mostly restricted to the ventral cortex, shows significant intrasubject variability, and most likely an asymmetry between the left and the right hemisphere. However, no study so far has analyzed these properties in a sufficiently large cohort. Recently, the human connectome project (HCP) has contributed MRI data of over 1000 healthy participants, including 180 subjects with retinotopic mapping. This offers the unique opportunity to investigate inter subject variability and left right asymmetry in a large sample size, significantly improving our understanding of this important area fundamental for many perceptual functions such as reading or color vision.

Number of students allowed on this project: 2

Any prerequisites? (Please list): Either PSYC328 or PSYC362

Wandell, B. A., Dumoulin, S. O., & Brewer, A. A. (2007). Visual field maps in human cortex. *Neuron*, 56(2), 366-383.

Benson, N., Jamison, K. W., Arcaro, M. J., Vu, A., Glasser, M. F., Coalson, T. S., ... & Kay, K. (2018). The HCP 7T Retinotopy Dataset. *BioRxiv*, 308247.

Taylor, H., Puckett, A. M., Isherwood, Z. J., & Schira, M. M. (2015). Mapping human V4: Correcting artefact reveals hemifield organisation.

Tootell, R. B., & Hadjikhani, N. (2001). Where is 'dorsal V4' in human visual cortex? Retinotopic, topographic and functional evidence. *Cerebral cortex*, 11(4), 298-311.

PROJECT 3**Name of Supervisor: Mark Schira**

Name of co-supervisor (if applicable):

Supervisor Email: mschira@uow.edu.au

Title of project 3: Letter recognition, reading and crowding.

Description of project 3:

Crowding is the phenomenon that recognition of letters is impaired when presented with flanking letters compared to when presented on their own. The effects of crowding are strongly intertwined with attentional selection, but also understood as a tool into the cortical processes underlying reading. Specifically, it has been shown that crowding increases with increasing distance from the center of the visual field, with essentially no crowding in the fovea. This increase in crowding is faster than the loss of visual acuity can explain. This suggests that the resolution of attention decreases faster than retinal acuity. Recent work has also suggested differences in endogenous vs exogenous attentional cues. In this project the student will design, conduct and analyze a psychophysical experiment.

Number of students allowed on this project: 2

Any prerequisites? (Please list): PSYC327 or PSYC328

References/ recommended readings:

Strasburger, H, On the cortical mapping function – Visual space, cortical space, and crowding.
<https://doi.org/10.1016/j.visres.2021.107972>

Lleras, A., Buetti, S., & Xu, Z. J. (2022). Incorporating the properties of peripheral vision into theories of visual search. *Nature Reviews Psychology*, 1(10), 590-604.

Kristjansson, A., & Sigurdardottir, H. M. (2023). The role of visual factors in dyslexia. *Journal of Cognition*, 6(1).

Matthew Schweickle

PROJECT 1

Name of Supervisor: Matthew Schweickle

Name of co-supervisor (if applicable):

Supervisor Email: mschweic@uow.edu.au

Title of project 1: Exploring the sources and experience of psychological pressure in high-performance domains

Description of project 1: This project will involve interviewing participants who regularly perform in fields characterised by psychological pressure (e.g., sports, music/performing arts, civilian high stakes, military, business/academics). Each student on the project will explore a different performance domain (e.g., one student may examine those competing in sport, another may examine those engaging in music/performing arts). This will be a qualitative project, and will involve recruiting and interviewing participants, and transcribing and analysing interview data.

Number of students allowed on this project: 3

Any prerequisites? (Please list): N/A

References/ recommended readings:

Baumeister, R. F., & Showers, C. J. (1986). A review of paradoxical performance effects: Choking under pressure in sports and mental tests. *European Journal of Social Psychology, 16*(4), 361-383.

Schweickle, M. J., Vella, S. A., & Swann, C. (2021). Exploring the “clutch” in clutch performance: A qualitative investigation of the experience of pressure in successful performance. *Psychology of Sport and Exercise, 54*, 101889.

Low, W. R., Sandercock, G. R. H., Freeman, P., Winter, M. E., Butt, J., & Maynard, I. (2021). Pressure training for performance domains: A meta-analysis. *Sport, Exercise, and Performance Psychology, 10*(1), 149.

Albertella, L., Kirkham, R., Adler, A. B., Crampton, J., Drummond, S., Fogarty, G. J., ... & Yücel, M. (2023). Building a transdisciplinary expert consensus on the cognitive drivers of performance under pressure: An international multi-panel Delphi study. *Frontiers in psychology, 13*, 1017675.

Stewart Vella

PROJECT 1

Name of Supervisor: Stewart Vella

Name of co-supervisor (if applicable):

Supervisor Email: stvella@uow.edu.au

Title of project 1: Social identity and help seeking in sport

Description of project 1:

Situated within the Global Alliance for Mental Health and Sport at UOW, this project will explore whether one's social identity in sport is associated with their likelihood to seek help from a coach or teammates. The project has a particular focus on young men. Data will be drawn from a larger Randomised Control Study.

Number of students allowed on this project: 1

Any prerequisites? (Please list): No

References/ recommended readings:

Contact supervisor

Tracey Woolrych**PROJECT 1****Name of Supervisor: Dr Tracey Woolrych**

Name of co-supervisor (if applicable):

Supervisor Email: woolrych@uow.edu.au

Title of project 1: Factors that impact loneliness – the role of cognitive biases

Description of project 1:

This project will investigate the role of cognitive biases and their impact on loneliness. The project can also investigate other factors such as attribution style; personality; personal characteristics (such as self-esteem, self-confidence) and potential other factors. The project can also investigate differences between chronic, transient and non-lonely people; and/or investigate loneliness across a range of different social contexts. The study will use online data-gathering techniques, with mediation and moderation analyses possible.

Number of students allowed on this project: 2

Any prerequisites? (Please list): none

References/ recommended readings:

- Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, 13, 447–454. <http://dx.doi.org/10.1016/j.tics.2009.06.005>.
- Qualter, P., Vanhalst, J., Harris, R., Van Roekel, E., Lodder, G., Bangee, M., ... Verhagen, M. (2015). Loneliness across the life span. *Perspectives on Psychological Science*, 10, 250–264. <http://dx.doi.org/10.1177/1745691615568999>.
- Spithoven, A. W., Bijttebier, P., & Goossens, L. (2017). It is all in their mind: A review on information processing bias in lonely individuals. *Clinical Psychology Review*, 58, 97-114.
- Vanhalst, J., Soenens, B., Luyckx, K., Van Petegem, S., Weeks, M. S., & Asher, S. R. (2015). Why do the lonely stay lonely? Chronically lonely adolescents' attributions and emotions in situations of social inclusion and exclusion. *Journal of Personality and Social Psychology*, 109(5), 932.

PROJECT 2**Name of Supervisor: Dr Tracey Woolrych**

Name of co-supervisor (if applicable):

Supervisor Email: woolrych@uow.edu.au

Title project 2: Do lonely people empathise differently?

Description of project 2:

Similar to project 1, in that this project will be investigating factors impacting loneliness, but this time with a focus on the role of empathy. Empathy is a social-cognitive set of processes and some research indicates that lonely people may differ to non-lonely people in terms of empathy (dispositional). This research will see to identify a relevant empathy measure and look at the relationships between loneliness and different empathic factors. This could also be an online experiment, that seeks to manipulate feelings of social isolation (different to loneliness, but often used as a technique in the literature). This project could also look at other factors that may mediate or moderate the relationships between these two constructs.

Number of students allowed on this project: 1

Any prerequisites? (Please list):

References/ recommended readings:

- Davis, M.H. (1983). Measuring individual differences in Empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126. Doi: 10.1037/0022-3514.44.1.113
- DeWall, C.N., & Baumeister, R.F. (2006). Alone but feeling no pain: Effects of social exclusion on physical pain tolerance and pain thresholds, affective forecasting, and interpersonal empathy. *Attitudes and Social Cognition*, 19(1), 1-15.
- Hu, T., Zheng, X., & Huang, M. (2020). Absence and presence of human interaction: The relationship between loneliness and empathy. *Frontiers in psychology*, 11, 768.

PROJECT 3**Name of Supervisor: Dr Tracey Woolrych**

Name of co-supervisor (if applicable):

Supervisor Email: woolrych@uow.edu.au

Title of project 3: Psychology student's dispositional empathy and expectations of empathy in the therapeutic alliance

Description of project 3:

Research indicates that clinicians expectations of how much empathy they think they should demonstrate in their professional relationships with clients vary, and may not always align with client expectations. This project seeks to investigate undergraduate psychology student's viewpoints on this – how much empathy do they think clinicians *should* demonstrate to their clients? Does this vary by setting (clinical, versus counselling) or by client? (child vs adult)? The research in this area is still limited, but a scale adaptable to online testing can be used. This study would mostly be exploratory in nature.

Number of students allowed on this project: 1-2

Any prerequisites? (Please list):

References/ recommended readings:

Davis, M.H. (1983). Measuring individual differences in Empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126. Doi: 10.1037/0022-3514.44.1.113

Hojat, M., Mangione, S., Nasca, T.J., Cohen, M.J.M., Gonella, J.S., et al. (2001). The Jefferson Scale of Physician Empathy: Development and preliminary psychometric data. *Educational and Psychological Measurement*, 61(2), 349-365.

Mercer, S. W., Reilly, D., & Watt, G. C. (2002). The importance of empathy in the enablement of patients attending the Glasgow Homoeopathic Hospital. *British Journal of General Practice*, 52(484), 901-905.